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DEQ - WASTE DIVISION

# Solid Waste Management Plan



Commonwealth  
of Virginia

Department of Health Division of Solid and Hazardous  
Waste Management

Promulgated in fulfillment of Subtitle D, Section 4008, of the Federal Resource Conservation and Recovery Act of 1976 (PL94-580) and in conformity with the General Administrative Services Act, Title 9, Chapter 1,1.

This is a new management plan:

Preliminary Approval by State Board of Health — November 30, 1978.

Public Hearing held December 21, 1978.

Revisions Approved by State Board of Health — January 31, 1979.

Public Hearing held April 2, 1979.

Adopted by State Board of Health — May 24, 1979.

Effective October 15, 1979.

Copies may be obtained from: State Department of Health, Division of Solid & Hazardous Waste Management, 927 James Madison Building, 109 Governor Street, Richmond, Virginia 23219.

## PREFACE

This State Solid Waste Management Plan has been prepared in fulfillment of the requirements of Subtitle D, Section 4008, of the Federal Resource Conservation and Recovery Act (PL 94-580), by the Division of Solid and Hazardous Waste Management of the State Health Department, with the assistance of Malcolm Pirnie Engineers, Inc., consulting environmental engineers of Newport News, Virginia.

An earlier draft of this Plan was distributed on September 5, 1978 to local governments and agencies, regional planning agencies, interested citizens and environmental groups, as well as state agencies. Eight regional workshops, to review the Plan and receive comments, were held throughout the state during October and November 1978. Written comments have been received from state agencies, local governments, regional planning agencies, industry and others.

As a result of the comments received, a revised draft Plan was prepared on November 21, 1978, and given preliminary approval by the Board of Health on November 30, 1978.

Comments on the November 21, 1978 draft of the Plan, received at a formal public hearing on December 21, 1978, were considered by the State Health Department, which recommended revising the Plan to include certain of the comments made. At its January 31, 1979 meeting, the Board of Health approved these recommended changes and directed that the Plan be revised to include them.

The revised draft of the Plan, containing the Board's approved comments, was then publicly distributed, and a second public hearing held to receive further comments. As a result of the comments received, the Plan was again revised and resubmitted to the Board of Health, which approved the changes and adopted the plan at its May 24, 1979 meeting.

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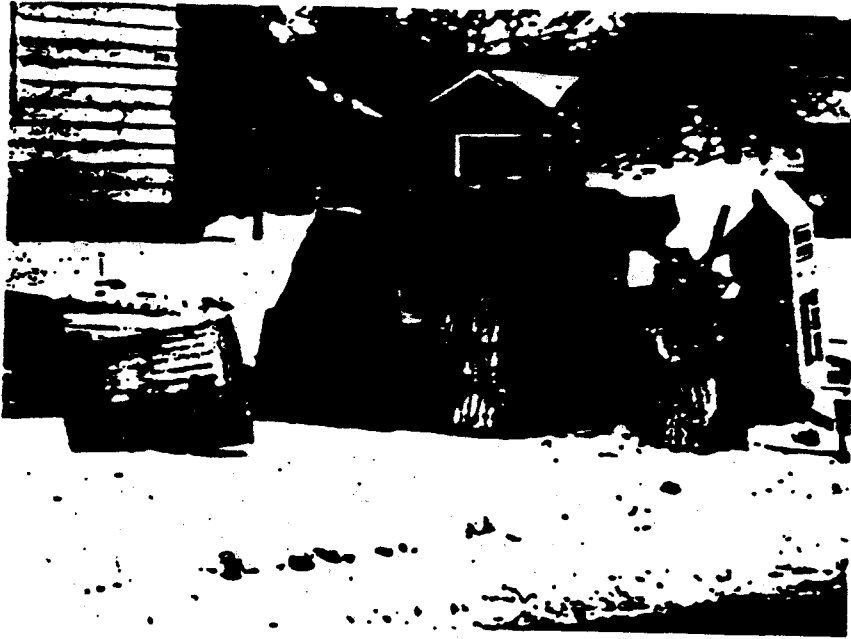
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## DEFINITIONS

Terms not defined below have the meanings assigned them by Section 1004 of the Resource Conservation and Recovery Act (RCRA).

<b>abandoned facility</b>	an inactive solid waste disposal facility which poses a reasonable probability of adverse effects on public health or the environment.
<b>administration</b>	the direction and management of Plan implementation to ensure adherence to Plan objectives.
<b>closed facility</b>	a facility which has been properly closed so as to eliminate or minimize adverse effects on public health or the environment.
<b>Criteria</b>	refers to the "Regulations for Classification of Solid Waste Disposal Facilities," Part 257 of Chapter I, Title 40, promulgated under Section 4004 of RCRA.
<b>delivery document</b>	a shipping paper (bill of lading, waybill, dangerous cargo manifest, or other shipping document) used in lieu of the original manifest to fulfill record-keeping requirements for hazardous waste transportation.
<b>disposal</b>	the discharge, deposit, injection, dumping, spilling, leaking, or placing of any solid waste or hazardous waste into or on any land or water so that such solid waste or hazardous waste or any constituent thereof may enter the environment or be emitted into the air or discharged into any waters, including ground waters.
<b>facility</b>	a solid waste processing or disposal facility or a resource recovery facility, including land used for solid waste disposal within the meaning of RCRA. Examples include sanitary landfills, surface impoundments, landspreading operations, incinerators, transfer stations, pyrolysis plants, refuse fired boilers, etc.
<b>function</b>	a category in which an activity can take place; for instance, collection, disposal, processing are functions.
<b>generation of hazardous waste</b>	the act or process of producing hazardous waste.
<b>goals</b>	the desired conditions or general ends towards which the achievement of objectives is directed; for example, the protection of public health and welfare.
<b>hazardous waste</b>	<p>as defined in Section 1004(5) of the Resource Conservation and Recovery Act, a solid waste, or combination of solid wastes, which because of its quantity, concentration, or physical, chemical or infectious characteristics may:</p> <p>(a) cause, or significantly contribute to an increase in mortality or an increase in serious irreversible, or incapacitating reversible, illness; or</p>

	(b) pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported, or disposed of, or otherwise managed.
hazardous waste management	the systematic control of the collection, source separation, storage, transportation, processing, treatment, recovery, and disposal of hazardous wastes.
identification code	the unique code assigned to each transporter of hazardous waste by the State.
implementation	putting the Plan into practice by carrying out planned activities, including compliance and enforcement activities, or insuring such activities are carried out.
inventory of open dumps	as required under Section 4005(b), the list of those disposal facilities which do not meet the Criteria.
long-term contract	used in relation to solid waste supply, a contract of sufficient duration to assure the viability of a resource recovery facility (to the extent that such viability depends upon solid waste supply).
manifest	the form used for identifying the quantity, composition, and the origin, routing and destination of hazardous waste during its transportation from the point of generation to the point of disposal, treatment, or storage.
mode	any of the following transportation methods: rail, highway, air, or water.
motor vehicle	a vehicle, machine, tractor, trailer, or semi-trailer, or any combination thereof, propelled or drawn by mechanical power and used upon the highways in transportation. It does not include a vehicle, locomotive, or car operated exclusively on a rail or rails.
MSW (municipal solid waste)	those solid waste constituents which are normally found in residential, commercial and institutional solid waste.
new open dump	a new facility not in compliance with the Criteria, or an existing facility which develops violations of the Criteria.
objectives	specific achievable ends; to be a product of plan and program implementation, such as closure of open dumps.
on-site disposal	facilities located on the generator's property, or operating exclusively for disposal of wastes generated by an entity (e.g., a hospital or other institution, or a factory), or a pollution control device such as a sewage treatment plant.
open dump	a site on which any solid waste or hazardous waste is placed, discharged, deposited, injected, dumped or spilled so as to create a nuisance or so as to pose a substantial present or potential hazard to human health or the environment, including the pollution of air, land, surface water or groundwater.



Solid waste management  
begins with  
collection and transport.



<b>operator</b>	a category including facility owners and operators.
<b>output</b>	a specific accomplishment in partial fulfillment of an objective; e.g., development of a permit system to aid in reaching the objective of the prevention of new open dumps.
<b>permit</b>	an entitlement to commence and continue operation of a facility as long as both procedural and performance standards are met; the term "permit" includes any functional equivalent such as a registration or license.
<b>permitted hazardous waste management facility</b>	(or "permitted facility") a hazardous waste treatment, storage, or disposal facility that has received a permit from the State Health Department.
<b>person</b>	an individual, trust, firm, joint stock company, corporation (including a government corporation), partnership, association, State, municipality, commission, political subdivision of a State, or any interstate body.
<b>planning</b>	a process that includes identifying problems, defining objectives, collecting information, analyzing alternatives and determining necessary activities and courses of action.
<b>processing</b>	preparation, treatment or conversion of waste by a series of actions, changes or functions that bring about a decided result.
<b>Program</b>	the whole solid waste effort in the State, including funded and unfunded activities, which may be outside EPA's purview.
<b>RCRA</b>	the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act of 1976 (42 USC 6901 <i>et seq.</i> ).
<b>recoverable</b>	the capability and likelihood of being recovered from solid waste for a commercial or industrial use.
<b>recovered material</b>	material which has been collected or recovered from solid waste.
<b>recovered resources</b>	material or energy recovered from solid waste.
<b>regulation</b>	the control, direction and governance of solid and hazardous waste activities by means of the adoption and enforcement of laws, ordinances, rules and regulations.
<b>requirements</b>	results of actions which must be agreed to by the State, and for which EPA may hold the State accountable.
<b>resource conservation</b>	reduction of the amounts of solid waste generated, reduction of overall resource consumption, and utilization of recovered resources.
<b>resource recovery</b>	the recovery of material or energy from solid waste.

<b>resource recovery system</b>	a solid waste management system which provides for collection, separation, recycling, and recovery of solid wastes, including disposal of nonrecoverable waste residues.
<b>resource recovery facility</b>	any facility at which solid waste is processed for the purpose of extracting, converting to energy, or otherwise separating and preparing solid waste for reuse.
<b>sanitary landfill</b>	a disposal facility for solid or hazardous waste so located, designed and operated that it does not pose a substantial present or potential hazard to human health or the environment, including pollution of air, land, surface water or ground water.
<b>septage</b>	any solid, semi-solid or liquid waste generated by removal or pumping for the purpose of maintenance, cleaning or emptying septic tanks.
<b>sludge</b>	any solid, semi-solid or liquid waste generated from a municipal, commercial, or industrial wastewater treatment plant, water supply treatment plant, or air pollution control facility or any other such waste having similar characteristics and effects.
<b>solid waste</b>	any garbage, refuse, sludge and other discarded material, including solid, liquid, semi-solid, or contained gaseous material, resulting from industrial, commercial, mining, and agricultural operations, and from community activities, but not including solid or dissolved material in domestic sewage, or solid or dissolved materials in irrigation return flows or industrial discharges which are sources subject to permit by the State Water Control Board, or source, special nuclear, or byproduct material as defined by the Atomic Energy Act of 1954, as amended (68 Stat. 923).
<b>solid waste management</b>	the systematic administration of activities which provide for the collection, source separation, storage, transportation, transfer, processing, treatment, and disposal of solid waste.
<b>solid waste management facility</b>	(a) any resource recovery system or component thereof, (b) any system, program, or facility for resource conservation, or (c) any facility for the treatment of solid wastes, including hazardous wastes, whether such facility is associated with facilities generating such wastes or otherwise.
<b>spill</b>	any accidental discharge of a hazardous waste into the environment.
<b>state solid waste management plan</b>	(also "State plan" or "Plan") the document required by EPA of a State in return for financial assistance under Section 4008(a)(1); contains all State policies concerning solid waste and incorporates by reference regional plans and facility compliance schedules.



<b>storage</b>	in connection with hazardous waste, the containment of hazardous waste, either on a temporary basis or for a period of years, in such a manner as not to constitute disposal of such hazardous waste.
<b>strategy</b>	a collection of actions performed in pursuit of an objective.
<b>substate</b>	any public regional, local, county, municipal, or intermunicipal agency, or regional or local public (including interstate) solid or hazardous waste management authority, or other public agency below the State level.
<b>transporter</b>	a person or Federal agency engaged in the transportation of hazardous waste by air, rail, highway, or water.
<b>transport vehicle</b>	a motor vehicle, rail freight car, freight container, cargo tank, portable tank, or vessel (as defined in 49 CFR 171.8) used for the transportation of hazardous waste.
<b>treatment</b>	in connection with hazardous waste, any method, technique, or process, including neutralization, designed to change the physical, chemical, or biological character or composition of any hazardous waste so as to neutralize such waste or so as to render such waste nonhazardous, safer for transport, amenable for recovery, amenable for storage, or reduced in volume; includes any activity or processing designed to change the physical form or chemical composition of hazardous waste so as to render it nonhazardous.
<b>utilization</b>	the beneficial use of a waste material, such as the use of wastewater treatment sludge for soil conditioning by land application.
<b>virgin material</b>	a raw material, including previously unused copper, aluminum, lead, zinc, iron, or other metal or metal ore, any undeveloped resource that is, or with new technology will become, a source of raw materials.
<b>waste category</b>	the type of waste as determined by source (e.g., municipal, industrial, pollution control).
<b>work program</b>	the portion of the grant application in which the applicant (State) addresses the outputs and activities it will accomplish with the grant funds; a portion of the State solid waste program, representing the State's contractual obligation incurred by grant acceptance.

## SUMMARY

### General

The Virginia State Solid Waste Management Plan has been developed to define the policies, goals and objectives of the State with regard to resource recovery and solid waste disposal practices. The Plan defines the administrative processes which the State Health Department will follow in cooperating with other State agencies, regional and local governments and private industry, to assure that solid waste resource recovery practices will advance, and disposal practices will be conducted in a manner which protects the public health and the general environment of the State.

The Plan has been developed to satisfy the requirements of the Federal Resource Conservation and Recovery Act (RCRA). In so doing the Plan includes significant new material which will require public consideration, administrative planning on the part of the State Health Department and other State agencies, as well as the development and enactment of legislation by the General Assembly and definitive planning and implementation actions by regional planning agencies and county and city governments.

The Plan will be revised and updated as required, on an annual basis, as administrative processes are developed and regional planning and program implementation take place. This first Plan, developed in accordance with RCRA requirements, therefore defines broad administrative parameters which will achieve more specific definition as the detailed efforts by all levels of government in the State are accomplished during the next few years.

### Highlights of the Plan

The highlights of the Plan may be summarized as follows:

- The areas served by the established 22 planning districts of the State have been identified at the present time as those regions within which solid waste management planning programs will take place.
- In accordance with current State statutes, the cities and counties within the planning regions will be responsible for the implementation of resource recovery and solid waste management programs. Such implementation activities will be limited to programs acceptable to local governments and may be carried out by the joint cooperative efforts of several local governments and/or the private sector.



- Suggested legislation will be developed for consideration by the General Assembly which will have as its goal that items containing the highest percentage of recovered materials practicable, consistent with reasonable levels of competition, performance standards and cost, and with appropriately adopted Federal specifications, be purchased when Federal funds are used for such purchase.

The following program activities will be accomplished during the first year:

- The State Health Department will have an intensive inventory of solid waste disposal sites made. This effort will secure evidence for the closing of disposal sites which are a hazard to the public health or the environment, and will assist in the development of abatement schedules for those disposal areas which may be upgraded.
- The State Health Department, in cooperation with the State Water Control Board and disposal facility operators, will develop a ground and surface water monitoring program at selected land disposal sites to gauge the potential for water pollution by leachate and to serve as an early warning system should leachate be detected in monitoring wells.
- The State Health Department will prepare and submit expanded rules and regulations as required for the control of new solid waste processing and disposal facilities to the State Board of Health for review and approval following a required public hearing.
- The State Health Department will prepare guidelines for the preparation of regional and subregional solid waste management plans.



Solid waste originates from many sources, such as:

- residential
- industrial
- tires
- construction debris





# CHAPTER I: GOALS AND OBJECTIVES

**General** The goals of the Commonwealth of Virginia Solid Waste Management Plan (the Plan), administered by the Division of Solid and Hazardous Waste Management of the State Department of Health, are defined as the desired conditions or general ends towards which the achievement of objectives are directed. Objectives are defined as specific achievable ends, and are to be a product of plan and program implementation.

**Goals** The four primary goals of the Plan are to:

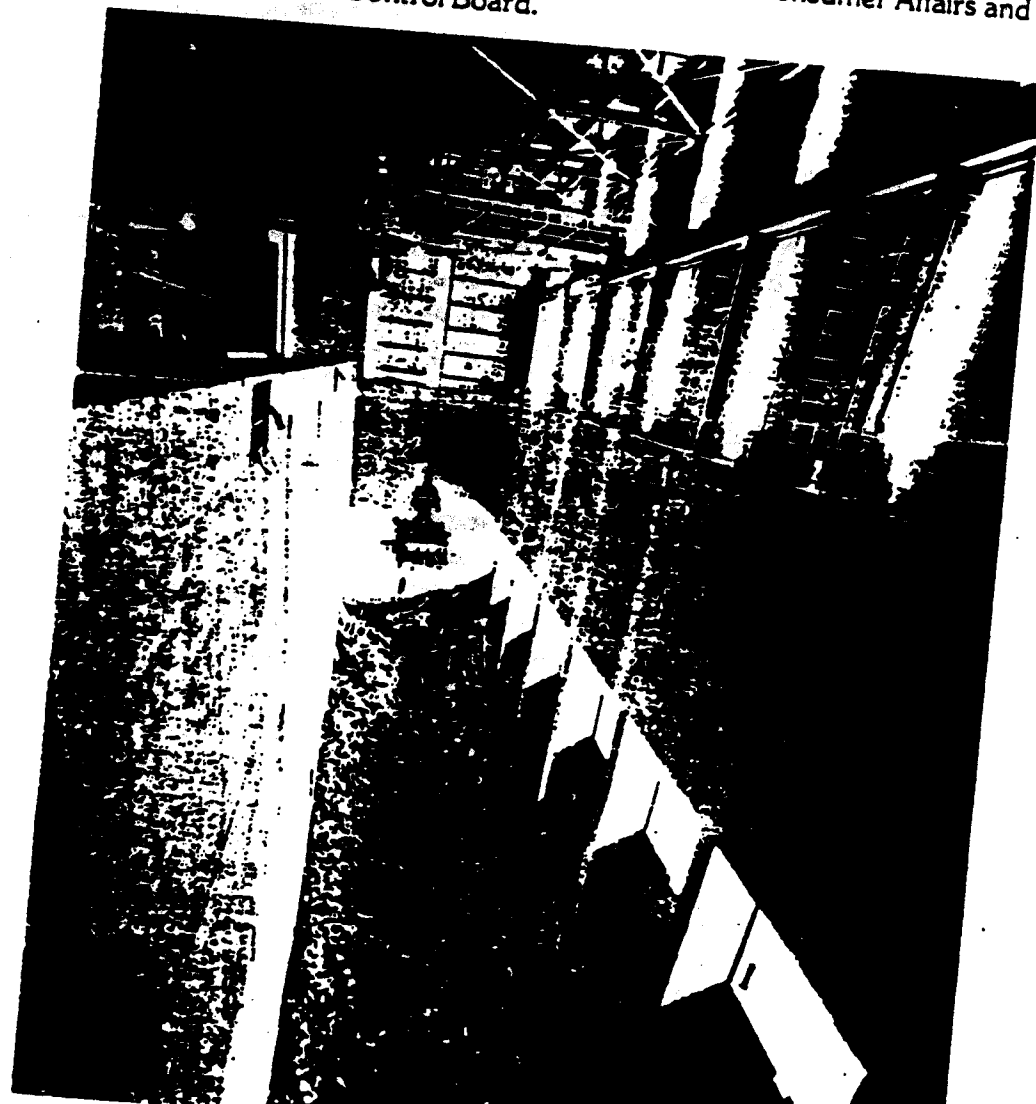
- provide adequate solid waste collection and disposal facilities for all solid waste generated in the State;
- assure environmentally sound, cost-effective disposal and/or recovery processes to protect the public health and the environment;
- maximize the recovery of materials and energy from solid waste, while conserving remaining natural resources;
- develop and implement safe processing, recovery and disposal practices of hazardous wastes to protect the public health and the environment.

This Plan is also designed to fulfill the requirements of the Federal Resource Conservation and Recovery Act of 1976 (RCRA). In accordance with Section 4006 of RCRA the State Health Department was designated by former Governor Godwin to be the State agency responsible for the development and implementation of the Plan. The United States Environmental Protection Agency (EPA) has not yet promulgated final guidelines for the preparation of statewide solid waste management plans as required by RCRA. Therefore, it may be necessary to modify this Plan, when such final guidelines are issued, to permit planning and implementation programs to become eligible for federal financial assistance to be provided by RCRA.

**Objectives** Specific objectives of the Plan include:

- providing assistance in regional and statewide solid waste management planning and program implementation, including site evaluation, and fostering the development of resource recovery programs where feasible;
- providing technical assistance for the development of source separation programs throughout Virginia, to complement resource recovery facilities in urban areas and to serve as an alternative in other areas where high-technology resource recovery is not economically feasible;
- investigation of cooperative or legislative methods by which the quantity of solid wastes might be reduced;

- evaluation of the potential to develop legislation which would expand the procurement and use of recovered materials by State and local governments and industry;
- inventory solid waste disposal facilities and initiating appropriate regulatory actions which will result in the closure or upgrading of all open dumps in Virginia;
- preparation of rules and regulations and administrative procedures to control the storage, transportation, processing and disposal of all hazardous wastes;
- preparation of regulations on co-disposal of municipal solid waste and sewage treatment plant sludges;
- proposal of methods to improve the efficiency and cost effectiveness of refuse collection practices in Virginia;
- structuring administrative procedures in full recognition of existing laws and regulations, and program responsibilities of other State agencies; and
- preparation of guidelines on land application of solid waste in conjunction with the Virginia Department of Agriculture and Consumer Affairs and the State Water Control Board.



A large resource recovery facility at Saugus, Mass.

## CHAPTER II: ADMINISTRATIVE OBJECTIVES

**General** Implementation of the State's proposed Solid and Hazardous Waste Management Act, and RCRA, will require the development and implementation of administrative systems and procedures within the framework of Virginia's State, regional, and local governmental agencies. This chapter outlines the objectives to be realized through the development of these systems, and the methodology through which these objectives are to be realized.

### Identification of Responsibilities

As a part of the planning process, the Plan will identify the responsibilities of State, regional and local agencies in the development and implementation of the Plan. These identifications will be made in the areas of planning, implementation, administration and regulation. Also included in the Plan will be provisions for coordination among regions, between planning and implementation agencies within regions, and between Section 208 (of the Clean Water Act) and other agencies with identified solid waste responsibilities.

#### A. Waste Categories

The following waste categories have been determined to require an assignment of responsibility:

- Municipal Solid Waste (Residential, Commercial and Institutional)
- Municipal Wastewater Treatment Sludge
- Water Treatment Sludge
- Agricultural Wastes
- Septage
- Industrial Solid Wastes
- Industrial Wastewater Treatment Sludge
- Mining Wastes
- Hazardous Wastes

Other waste categories of lesser quantity exist. These will be considered on a case by case basis.

#### B. Management Functions

The following management functions have been determined to require an assignment of responsibility:

- |                             |                     |
|-----------------------------|---------------------|
| • Collection                | • Waste Reduction   |
| • Transfer and/or Transport | • Resource Recovery |
| • Processing                | • Utilization       |
| • Source Separation         | • Disposal          |

Continued on page nine



**Table 1: Responsibility Identification for**

Waste Category	Management Function	Area of Responsibility			
		1	2	3	
<b>Municipal Solid Waste</b>	Collection	L, R	L, PS	L	
	Transfer	L, R	L, PS	L	SHD, I
	Processing	SHD, L, R	L, PS	L	SHD, I
	Source Separation	L, R, S	L	L	SHD, I
	Waste Reduction	R, S	S	S	SHD, I
	Resource Recovery	SHD, R	L, PS	L, PS	SHD, I
	Disposal	SHD, R	L, PS	L, R	SHD, I
<b>Municipal Wastewater Treatment Sludge</b>	Processing	L	L, PS	L	SWCB, SHD
	Transport	L	L, PS	L	SWCB, SHD
	Utilization	L, R	L, PS	L	SWCB
	Disposal (Landfill)	L, R	L, PS	L	SHD
	Disposal (Land application)	L, R	L, PS	L	AC, SHD, SWCB
<b>Water Treatment Sludge</b>	Processing	L, R	L, PS	L	SWCB, SHD
	Transport	L, R	L, PS	L	SWCB, SHD
	Utilization	L, R	L, PS	L	SWCB, SHD
	Disposal (Landfill)	L, R	L, PS	L	SHD
	Disposal (Land application)	L, R	L, PS	L	AC, SWCB, SHD
<b>Agricultural Wastes</b>	Processing	R, PS	L, PS	L, PS	AC, SWCB
	Transport	R, PS	L, PS	L, PS	AC, SWCB
	Utilization	R, PS	L, PS	L, PS	AC, SWCB
	Disposal (Land application)	L, R, PS	L, PS	L, PS	AC, SWCB
	Disposal (Landfill)	L, R, PS	L, PS	L, PS	AC, SHD
<b>Septage</b>	Collection	L	L, PS	L	SHD
	Processing	L	L, PS	L	SHD
	Transport	L	L, PS	L	SHD
	Utilization	L, R	L, PS	L	SHD
	Disposal	L, R	L, PS	L	SHD



# Solid Waste Categories

Waste Category	Management Function	Area of Responsibility			
		1	2	3	4
<b>Industrial Solid Wastes</b>	Waste Reduction	R, PS	PS	PS	SHD
	Processing	R, PS	PS	PS	SHD
	Transport	PS, SHD	PS	PS	SHD
	Resource Recovery	R, PS, SHD	PS	PS	SHD
	Disposal	R, PS, SHD	PS	PS	SHD
<b>Industrial Wastewater Treatment Sludge</b>	Waste Reduction	R, PS	PS	PS	SWCB
	Processing	R, PS	PS	PS	SWCB
	Transport	R, PS, SHD	PS	PS	SWCB
	Resource Recovery	R, PS, SHD	PS	PS	SHD
	Disposal	R, PS, SHD	PS	PS	SWCB
<b>Mining Industry Wastes</b>	Processing	R, PS	PS	PS	SWCB, MQ, MLR
	Transport	R, PS	PS	PS	SWCB, MQ, MLR
	Utilization	R, PS	PS	PS	MQ, MLR
<b>Hazardous Wastes</b>	Disposal	R, PS	PS	PS	MLR, SWCB
	Processing	PS	PS	PS	SHD, SWCB
	Transport	R, PS	PS	PS	SHD, SWCB
	Utilization	R, PS	PS	PS	SHD, SWCB
	Disposal	R, PS, SHD	PS	PS	SHD, SWCB

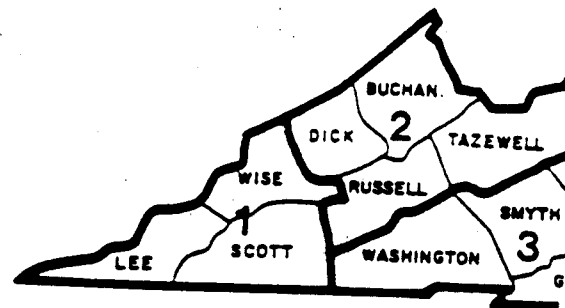
**KEY:** 1 Planning  
2 Implementation  
3 Administration  
4 Regulation

L = Local  
R = Regional Planning Agency  
PS = Private Sector  
S = State Agency:  
AC — Dept. of Agriculture and Commerce  
MLR — Div. of Mined Land Reclamation, Dept. of Conservation and Economic Development  
MQ — Div. of Mines and Quarries, Dept. of Labor and Industry  
SHD — State Health Dept.  
SWCB — State Water Control Board

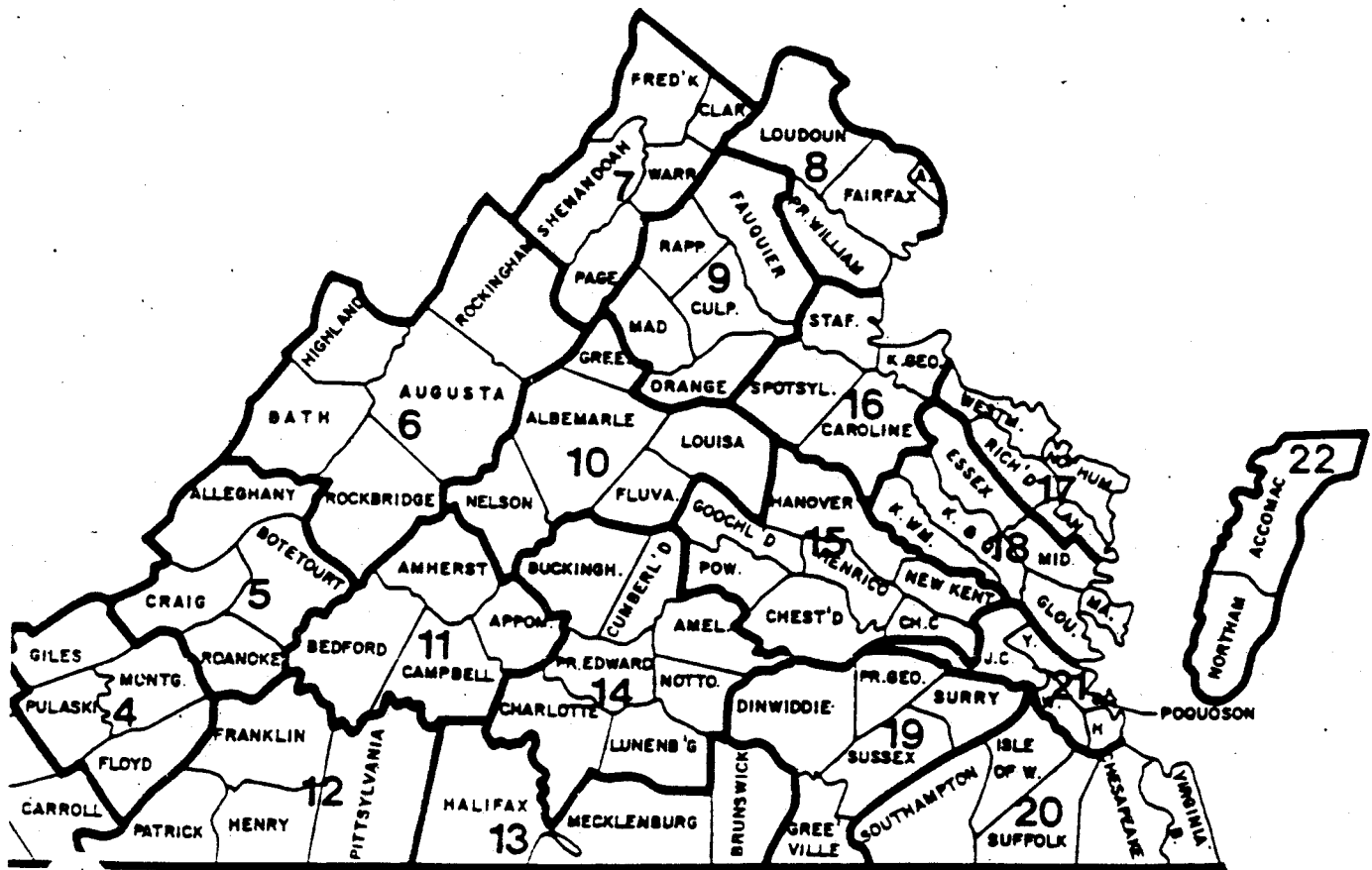
**Table 2**  
**Designated Regional Planning Agencies**

District	Name	Governments
1	Lenowisco	Lee County Scott County Wise County City of Norton Town of Big Stone Gap
2	Cumberland Plateau	Buchanan County Dickenson County Russell County Tazewell County Town of Bluefield Town of Richlands Town of Tazewell
3	Mount Rogers	Bland County Carroll County Grayson County Smyth County Washington County Wythe County City of Bristol City of Galax Town of Abingdon Town of Marion Town of Wytheville
4	New River Valley	Floyd County Giles County Montgomery County Pulaski County City of Radford Town of Blacksburg Town of Christiansburg Town of Pulaski
5	Fifth	Alleghany County Botetourt County Craig County Roanoke County City of Clifton Forge City of Covington City of Roanoke City of Salem Town of Vinton

**Figure 1**  
**Regional Planning Areas**



6	Central Shenandoah	Augusta County Bath County Highland County Rockbridge County Rockingham County City of Buena Vista City of Harrisonburg City of Lexington City of Staunton City of Waynesboro
7	Lord Fairfax	Clarke County Frederick County Page County Shenandoah County Warren County City of Winchester Town of Front Royal Town of Luray



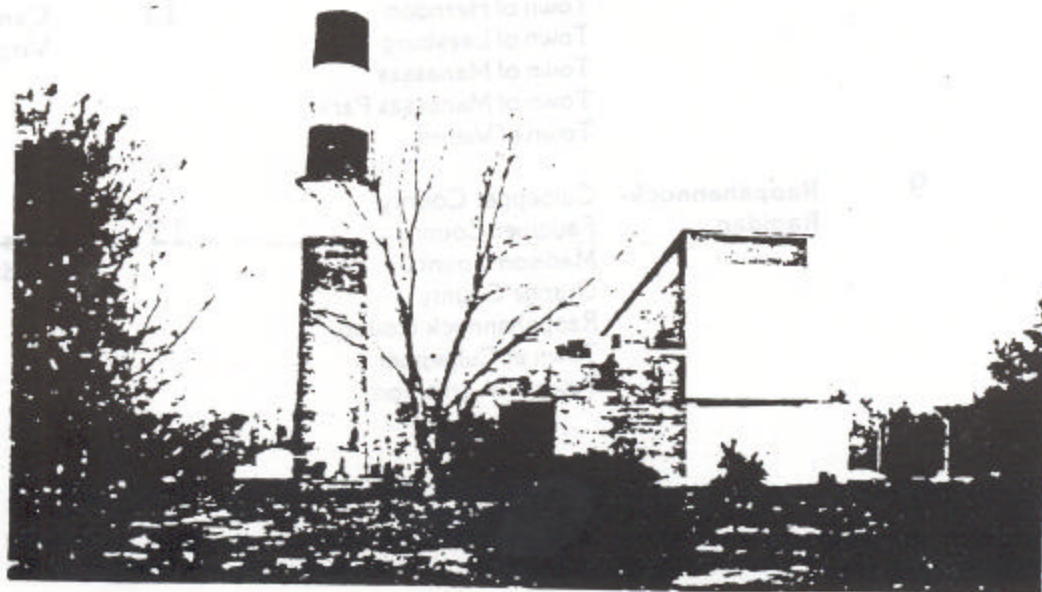
Source: Governor's Office, Division of State Planning and Community Affairs

8	Northern Virginia	Arlington County Fairfax County Loudoun County Prince William County City of Alexandria City of Fairfax City of Falls Church Town of Herndon Town of Leesburg Town of Manassas Town of Manassas Park Town of Vienna	10	Thomas Jefferson	Albemarle County Fluvanna County Greene County Louisa County Nelson County City of Charlottesville
9	Rappahannock-Rapidan	Culpepper County Fauquier County Madison County Orange County Rappahannock County Town of Culpepper Town of Warrenton	11	Central Virginia	Amherst County Appomattox County Bedford County Campbell County City of Bedford City of Lynchburg
			12	West Piedmont	Franklin County Henry County Patrick County Pittsylvania County City of Danville City of Martinsville Town of Rocky Mount

Table 2 (Continued)

13	Southside	Brunswick County Halifax County Mecklenburg County City of South Boston Town of South Hill	18	Middle Peninsula	Essex County Gloucester County King and Queen County King William County Mathews County Middlesex County
14	Piedmont	Amelia County Buckingham County Charlotte County Cumberland County Lunenburg County Nottoway County Prince Edward County Town of Farmville	19	Crater	Dinwiddie County Greensville County Prince George County Surry County Sussex County City of Colonial Heights City of Emporia City of Hopewell City of Petersburg
15	Richmond Regional	Charles City County Chesterfield County Goochland County Hanover County Henrico County New Kent County Powhatan County City of Richmond	20	Southeastern Virginia	Isle of Wight County Southampton County City of Chesapeake City of Franklin City of Norfolk City of Portsmouth City of Suffolk City of Virginia Beach
16	RADCO	Caroline County King George County Spotsylvania County Stafford County City of Fredericksburg	21	Peninsula	James City County York County City of Hampton City of Newport News City of Williamsburg City of Poquoson
17	Northern Neck	Lancaster County Northumberland County Richmond County Westmoreland County	22	Accomack-Norhampton	Accomack County Northampton County

Waste incinerator in  
Newport News, Virginia.





### C. Responsible Agencies

Table 1 indicates which level of government is responsible for each of the aforementioned waste categories and management functions. In some cases the actual agency is named, but in other cases such final identification must await further Plan development. The terms used in the table are discussed below:

- Local (L) means a local governmental agency such as a county, town, city, village, sewer district, solid waste district, etc.
- Regional (R) means one of the 22 regional planning agencies which together cover the State of Virginia. Regional Planning agencies are designated in Table 2 and shown on Figure 1.
- State (S) means an arm of the government of the State of Virginia including the State Health Department (SHD), the State Water Control Board (SWCB) and the State Air Pollution Control Board (SAPCB).

#### Ground Water Planning and Controls

The State Water Control Board is responsible for all aspects of the planning and quality control of ground waters of the State. (Section 62.1-44.83 et seq., Code of Virginia).

The State Health Department has primary enforcement responsibility under the Safe Drinking Water Act (PL 93-523, Part C, Underground Injection Control) to advise and cooperate with the Water Control Board to insure that leachate migration does not adversely affect groundwater quality.

#### Hazardous Waste Management

The Division of Solid and Hazardous Waste Management of the State Health Department is responsible for the general control of the processing, transport and disposal of hazardous wastes. (Chapter 28, Rules and Regulations of the Department of Health.) Other State agencies such as the State Water Control Board and the State Air Pollution Control Board exercise specific controls which apply to water and air resources. Hazardous waste management is discussed in detail in Chapter V.

#### State, Regional and Local Roles and Responsibilities

As designated by the State, regional planning agencies will be responsible for conducting studies dealing with various aspects of solid waste management as indicated in Table 1. Additionally, these studies will provide information as to whether resource recovery programs are feasible in the regions and make recommendations as to which agencies will implement recovery programs where such are found to be feasible. It is implied that regional planning will be responsive to the needs of those municipalities located within the region and that regional plans will reflect the contributions of local government to the planning process.

Section 32-9.1 of the Code of Virginia requires that each county and city in the State be responsible for the proper disposal of solid wastes. Basic project implementation responsibility therefore rests with the cities and counties of the State. Where mutually advantageous, these entities may join together to provide processing and disposal facilities and may singly or together utilize contractors under licensing, franchise, contract, or other arrangements.





Materials separation at the local level can play a significant role in resource recovery.

### Transitional Problems

The State Health Department recognizes that certain areas of the State have previously or are currently developing resource recovery and disposal programs. The State will cooperate with such areas so as not to impede their prior progress provided that the programs proposed comply with current State laws, rules and regulations and further comply with the general goals of RCRA. Pending the implementation of new programs, the responsibility for the conduct of solid waste processing and disposal programs will rest with the cities and counties of the State.

### Review and Reassessment

The State Health Department will maintain and keep current a roster of local solid waste management programs including current legal status, abatement schedules and planning and implementation progress. This roster will provide the basis for the development of an annual funding priority listing and for an enforcement priority listing.

### Funding Distribution and Priority

Funds will be available under Subtitle D, Sections 4008(a)(1) and (2) of RCRA. These funds will first be applied for Statewide planning and program effort. Second priority for funding under Section 4008(a)(1) will be for regional planning, with priorities between regions set by the State Health Department. These regional studies will reflect responsibilities indicated in Table 1 and would assume a general format and contents as shown in Chapter IX of this Plan.

**Based on the data obtained and institutional progress, funding priorities for subsequent years will be established.**

**The surveillance system will incorporate the inventory of existing solid waste facilities discussed in Chapter IV. The inventory will be phased to permit adequate resources to be allotted to its conduct, and time to review information on facilities from other State agencies. Since the listing of a facility in an open dump inventory will mean that the facility is in violation of State regulation or Federal Criteria, adequate evidence, documentation and due process will be observed. It is estimated that there are approximately 255 existing solid waste disposal facilities in the State. It is intended that 100 of these be inventoried by September 1, 1979. The balance will be inventoried by September 1, 1980.**

**Figure 2**  
**Locations of the 100**  
**Disposal Sites Surveyed**

A file of background and support data will be developed through the cooperation of the State Water Control Board.

## B. Existing Sites

Based on the findings of the State Health Department and the Water Control Board, area-specific data will be maintained to support the inventory and to

aid the State Health Department in determining the public health and environmental impact which would result from pollutant emission from an existing facility. These data will include:

- background hydrogeologic data for the site and its immediate surroundings;
- seasonal fluctuations in groundwater elevation;
- groundwater pH and chlorides;
- specific conductivity;
- heavy metals;
- other locally significant monitoring parameters.

### **C. Enforcement Methods**

Enforcement actions by the State Health Department will be based on operating data from field inspections, monitoring tests, and other sources which will be used to support the existing facility inventory. The data will be organized to support the evidentiary needs of the regulatory program. The data will also contain sufficient information to determine the priority of facilities receiving enforcement attention. All enforcement will be conducted equitably without discrimination against either public or private sites.

### **D. Closed Facilities**

Information on closed facilities will be collected and maintained by field personnel of the State Health Department. Contingency plans will be prepared for those cases in which data patterns indicate environmental damage from such facilities.



Surface water diversion is sometimes required at landfills to prevent leachate production.



### E. Onsite Facilities

The surveillance program will include waste generating industries or entities operating onsite disposal facilities. Appropriate data collection methodology will be used, as required.

### Facility Monitoring System

Table 3 presents an example of the parameters which may be monitored at those disposal sites considered to have a potential for surface or ground-water pollution by leachate based upon site sanitary surveys. At certain sites it may be necessary to monitor additional parameters because of unique soils, hydrology, waste characteristics, or other local conditions. These sites and parameters will be identified when data from the inventory are available.

**Table 3**  
**Water Quality Parameters**

Measured Semi-Annually	Measured Annually	Measured As Prescribed By State Health Department
Depth to ground water	Chemical oxygen demand (COD)	Selected metals (As, B, Cd, Cr, Cu, CN, Pb, Hg, Ni, Ag, Se, Zn)
Chlorides	Nitrate-nitrogen	Selected analyses (TOC, BOD, chlorinated hydrocarbons, chloro- phenoxys, persistent hydrocarbons, pesticides, PCB, phosphate, sulfate, total solids)
pH	Fecal coliforms	
Total hardness	Manganese	
Alkalinity	Iron	
Specific conductance		

Data storage and retrieval will be organized to facilitate annual review of routine data, so that emerging patterns of emissions, violations or other aberrations will be apparent.

Facility operating permits will require that monitoring facilities be provided where required and that water quality tests of designated parameters be performed either by a laboratory approved by the State Health Department or by the Division of Consolidated Laboratory Services on a prescribed schedule. Facility operators will be responsible for sample collection.

Field staff of the State Health Department or their authorized representatives will routinely inspect facilities at least six times per year. At the time of such inspections, samples may be collected for water quality analysis.

Criteria and field and laboratory procedures for monitoring and sample taking will be prescribed by the State Health Department in consultation with the State Water Control Board.

### Closing or Upgrading Open Dumps

It is the intent of the Plan to provide for the closing or upgrading of all facilities identified as open dumps according to the Criteria. No such facility shall be allowed to continue in operation unless there is no practical alternative facility or method of solid waste disposal, and in no case will such a



facility be permitted to continue in operation as an open dump more than five years from the date on which it is entered on the inventory.

A listing of all inventoried facilities classified as open dumps in accordance with EPA criteria, or rules and regulations of the Virginia Department of Health, will be established by September 1, 1979. This listing will be updated annually. Facilities for which disposal alternatives do or do not exist will also be identified on the listing.

### **Procedures for Closing or Upgrading Open Dumps**

**Owners of open dumps, whether public or private, shall be required to conduct a feasibility study to devise and evaluate alternative sites, processes or solid waste management procedures so that a practical compliance schedule may be developed leading to closure or upgrading of the dump. Such studies will be coordinated with the regional planning agency and be consistent with the regional and State solid waste management plans.**

The alternatives considered shall include, but not be limited to:

- resource recovery facilities
- diversion of solid wastes to existing sanitary landfills
- new public and private sanitary landfills
- upgrading of existing site

The feasibility study shall also determine the impact of source separation or waste reduction on reducing the quantity of waste materials entering the site.



Mountains of trash  
accumulate at  
an open dump.



The feasibility study shall take into account the environmental and resource losses due to allowing the open dump to continue in operation, the cost of alternatives, and the ability of the operator of, or the entity served by, an open dump to utilize the alternatives.

Each operator of an open dump shall have an opportunity to demonstrate to the State Health Department whether he is able to utilize the alternatives considered. In making judgment the State shall consider the cost of closing the open dump and utilizing an alternative, the length of time required before the alternative would be available, and the environmental impact of using the alternative.

#### **A. Acceptable Alternatives**

For open dumps found to have acceptable alternatives:

- all alternatives meeting the EPA Disposal Facility Classification Criteria discussed above shall be considered in order of their cost, environmental impact and recovery potential;
- the waste stream served by the open dump shall be diverted to alternative facilities, in order of the priority established above, and in accordance with the remaining capacity of the alternative site and transportation costs; and
- closure procedures and schedule for the open dump established.

Closure procedures shall be designed to minimize environmental damage. Receipt of wastes required to achieve final grades and contours may be allowed, but shall be for the minimum period necessary. Closure procedures shall include initial rodent control, crop restrictions, pH adjustment, adequate final cover, grading and seeding, and performance criteria such as net infiltration allowable.

Responsibility for monitoring and administering the closure procedures to be followed shall rest with the facility owner.

Long term monitoring of each closed site, and contingency planning for situations where problems are revealed by such monitoring, shall be the responsibility of the owner.

#### **B. No Acceptable Alternatives**

For open dumps found to have no acceptable alternatives, the feasibility study shall include a list of all facilities considered as alternatives and an explanation of why each does not meet the required standards. The feasibility study shall also include:

- a description of the amount and types of wastes for which there is no alternative disposal site;
- a scheme to give priority to establishing replacement capacity for these facilities;



- an environmental assessment of the facility including quarterly and annual predictions of damage resulting from operation of the facility; and
- a list and schedule of remedial measures including design modifications, best management practices, waste diversion and other possible remedial measures.

### **C. Conditional Operating Permits**

Facilities placed on a compliance schedule as described above shall be issued a conditional operating permit which may be revoked if the schedule of remedial measures is not achieved.

### **Procedures for Establishment of New Sanitary Landfills**

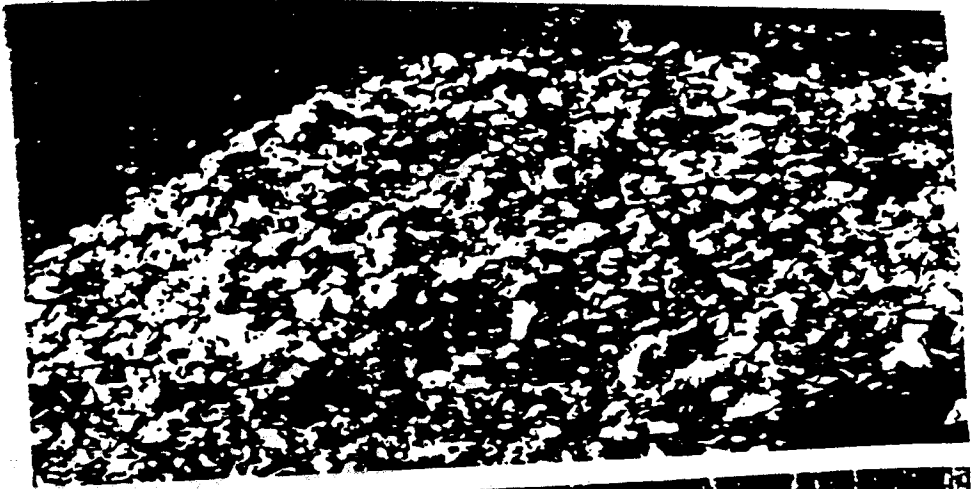
Under rules and regulations to be developed by the State Health Department, it is the intention of the Plan to require that all new solid waste disposal facilities established in the State meet the Criteria. Administrative and legislative steps will be taken to require that:

- A prospective operator of a new facility notify the State of the intended location, and demonstrate financial responsibility as described in Appendix A;
- Preliminary approval or disapproval of the location will be granted based on a preliminary site inspection, consistency with the Plan (see Chapter IV), and a demonstration of adequate financial responsibility;
- If preliminary approval is granted, the prospective operator will initiate permit procedures with the responsible agency as identified in the Plan. The operator will supply such information as:
  - (1) site engineering plan and pertinent geological evaluation
  - (2) anticipated site life
  - (3) categories of waste to be accepted
  - (4) land use permit obtained from the local governing body in those cases where a zoning ordinance is in effect
  - (5) other information as required to determine compliance with disposal facility standards;
- The State will review permit applications to determine compliance with disposal facility standards;
- The State will determine if the proposed site meets disposal facility standards and is otherwise in conformance with the Plan. If so, approval of the construction permit will be granted; and
- The prepared site will be inspected to determine whether engineering specifications have been met. If so, approval of the operating permit will be granted.

### **Control of Existing Sites**

In order to ensure that open dumps are closed or upgraded, and that acceptable sites are not degraded to open dump status, the sites will be inspected at least six times per year and procedures for permit issuance, permit

Working trench of a landfill  
in Central Virginia.



The area fill method is being  
used at this Virginia landfill.



revocation, monitoring, and obtaining remedies for violations as contained in current rules and regulations will be exercised.

#### **A. Permit Issuance**

Each existing disposal facility will be required to have a valid operating permit. Administrative procedures currently followed by the State Health Department include permit issuance.

#### **B. Permit Revocation**

Facilities which are determined to be open dumps, but are capable of being upgraded, will be required to submit a plan and schedule for engineering and operating improvements to bring the facility into compliance with the Criteria. This plan will be subject to review and approval by the Division of Solid and Hazardous Waste Management of the State Health Department. Upon approval, the State will issue a conditional operating permit incorporating the schedule of remedial measures. Failure to comply with this schedule shall be grounds for revocation of the conditional permit and closing of the facility.

#### **C. Site Inspection**

Regular State inspection of all solid waste disposal facilities will continue at the rate of at least six inspections per site per year. Special inspection schedules



will be established for marginally operated facilities. An ongoing training program will be continued for site inspectors, who will be provided with detailed instructions for checking on the procedures, conditions, and monitoring requirements specified in the site permit.

#### **D. Monitoring**

When monitoring is deemed to be necessary to assure protection of the health and environment, the facility operators will be required to install appropriate monitoring equipment and to submit and maintain sampling records certified by the facility operator as to their correctness. Additional samples may be collected and analyzed by the State Health Department personnel at no cost to the owner as part of the routine inspection procedures. Monitoring data will be used to support corrective, preventive, and punitive action.

#### **E. Remedies for Violations**

Informal, administrative and/or non-judicial remedies will be used to correct permit violations wherever possible. In cases of operator recalcitrance, current judicial remedies will be pursued.

#### **F. Regulatory Capabilities**

The following capabilities will be developed:

- Inspection program to assure operations which are in accordance with ordinances.
- Surveillance program capable of detecting any adverse effects on health or the environment from solid waste processing and disposal activities.
- Ability to diagnose the cause of adverse effects based on engineering and background data on file, and on routine surveillance.
- Technical assistance capability to work with the site operator to determine acceptable remedial actions.
- Administrative procedures adequate to notify a recalcitrant operator, seek voluntary compliance, provide due process, affix or mandate an engineering remedy, and withstand judicial review.
- Evidence-gathering techniques to provide support of civil or criminal enforcement actions.



A landfill  
compaction unit.



## CHAPTER III: REGULATORY OBJECTIVES

### **General**    The regulatory objectives of the Plan include:

- prohibition of the operation of open dumps and the establishment of new open dumps;
- provision for the closing and/or upgrading of all existing open dumps within a period of five years;
- program coordination with other State departments and agencies which have regulatory authority pertaining to solid waste facilities;
- a provision that materials purchased with Federal funds by the State, or any political subdivision of the State, contain the highest percentage of recovered materials practicable consistent with reasonable levels of competition, availability, performance and costs, and with appropriately adopted Federal specifications; and
- a provision that within reasonable economic and technological constraints, all solid waste be utilized for resource recovery, or otherwise be disposed in an environmentally sound manner which will protect the public health.

### **Adoption and Promulgation of Rules and Regulations**

Under existing statutes of the Commonwealth of Virginia (the Administrative Process Act), the State Health Department must adhere to specific procedures to officially promulgate rules and regulations. Included in these prescribed procedures is the requirement for formal public hearings and the coordination of programming with other State agencies. Following the hearing and coordination effort, appropriately revised rules and regulations are considered and duly enacted by the State Board of Health. Rules and regulations are enacted under the general authority which the General Assembly has delegated to the Health Department.

### **General Regulatory Powers**

Regulatory powers are required to ensure that open dumps are identified, and closed or upgraded, and that acceptable facilities are not degraded to open dump status.

These regulatory powers include:

- Surveillance (inspection and monitoring);
- Facility assessment and review (establishment of standards);
- Administrative remedy powers;
- Judicial access; and
- Financial aid to regions and localities.

These general powers are discussed below.





Groundwater monitoring wells are required at many landfills.

Laboratory analysis of leachate provides a check of groundwater quality.



### A. Surveillance

The goal of the surveillance program is to continue existing surveillance activities of solid waste disposal facilities and to upgrade these activities to meet new State and Federal criteria and guidelines. This will be accomplished as follows:

- Existing surveillance activities will be continued, and an inspection of each solid waste disposal facility will be made six times per year. More frequent inspection will be made as required.
- Surveillance personnel will take part in in-service training programs to better accomplish their assigned tasks.
- All proposed solid waste facility sites will be investigated.
- The State Health Department will continue to respond to all complaints in a timely manner, affecting corrective action as required.
- A schedule for the collection of monitoring samples will be developed and implemented.



## **B. Facility Assessment and Review**

The inspection findings of field staff and surveillance monitoring data will be regularly reviewed and evaluated by the central office staff of the Division of Solid and Hazardous Waste Management with assistance from the staff of the State Water Control Board, for program administrative and enforcement factors. This review and evaluation will be directed to the achievement of the goals and objectives of the Plan.

## **C. Permits, Reviews and Remedies**

The goal is to establish an effective permit system for the approval of solid waste management facilities. To accomplish this:

- The current permit system will be evaluated to assure compliance with the State Solid and Hazardous Waste Management Act.
- The system for the issuance, modification, and revocation of permits will be evaluated as above.

## **D. Judicial Access**

Under the existing laws of the Commonwealth, the State Health Department has the capability to bring an action against any operator of a solid waste processing or disposal facility which causes a public health hazard. The Department may also seek court injunction requiring the closure of a facility which is in violation of current statutes.

The State Health Department will develop a system of hearings and stipulated orders by the Commissioner of Health to be exercised against those facilities which are to be placed on an abatement schedule.

A citizen may commence an action against any agency of the Commonwealth charging an agency with failure to adequately enforce the law and rules and regulations pertinent to the control of the operation of a solid waste processing or disposal facility.

## **E. Federal Financial Aid to Regions and Localities**

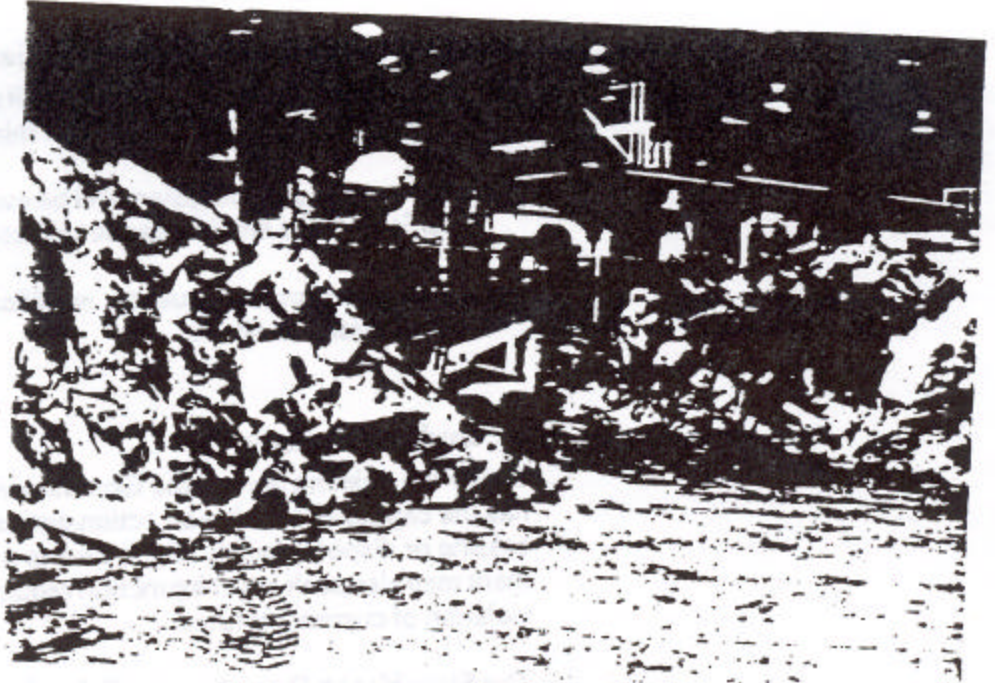
The State Health Department will administer Federal grants to designated regions and local governments. Currently two grant needs have been identified. In order of priority, these are:

- Grants to assist the designated regions in assembling basic planning information for management of solid wastes and identifying regional implementation agencies. Grants for such activities will be sought under the terms of Subtitle D, Section 4008(a)(1) of the RCRA.
- Grants to assist municipalities or groups of municipalities which are currently in the process of making implementation decisions. Such grants would be assigned to aid with the follow-through work associated with implementation. The source of such grant funds would be Subtitle D, Section 4008(a)(2) of RCRA.

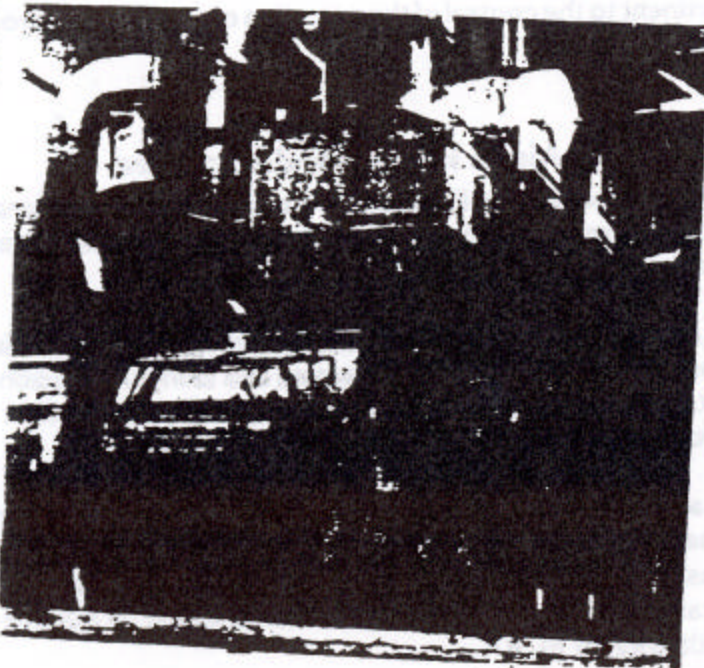


## Resource Recovery Facility in Salem, Virginia

Solid waste delivered by collection vehicles is stored on the tipping floor.



This furnace, a modular combustion unit, recovers energy as steam, which is then purchased by a local manufacturing facility.



Residual ash is loaded onto trucks for conveyance to a nearby land disposal site.



## CHAPTER IV: SOLID WASTE MANAGEMENT AND RESOURCE RECOVERY PLANNING OBJECTIVES

### General

The objectives of the Plan in the areas of solid waste management and resource recovery are to ensure that the supply of facilities and services is adequate to meet existing needs, that adequate alternatives are available to support closing or upgrading open dumps, and that environmentally sound disposal practices, including resource conservation and recovery, will be adequate for the foreseeable future.

The Plan incorporates regional plans, as appropriate, to achieve these objectives, and the State issuance of facility permits will be consistent with these regional plans.

Planning for hazardous waste facilities and services will be included, as determined necessary by the capacity assessment discussed below. See Chapter V for additional discussion of hazardous waste management.

### Assessment of Solid Waste Processing and Disposal Capacity Needs

Current and projected quantities and characteristics of municipal solid waste (MSW), by region, will be developed during the next year. These data will be based on earlier studies and ongoing regional and local efforts. Identification of recoverable materials will be made to assist with resource recovery planning.

### Market Studies

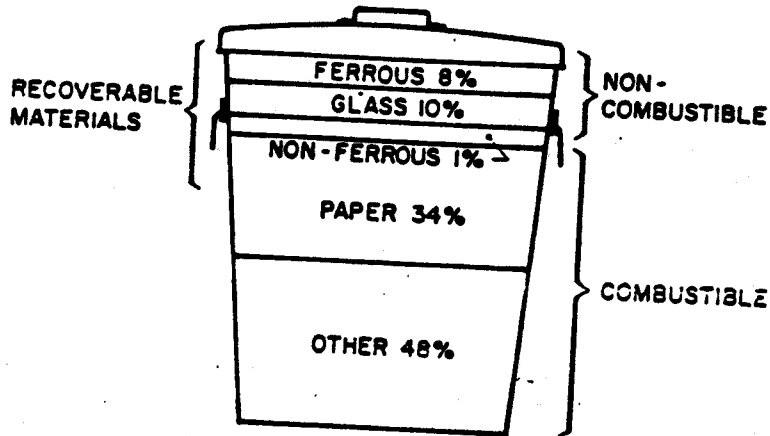
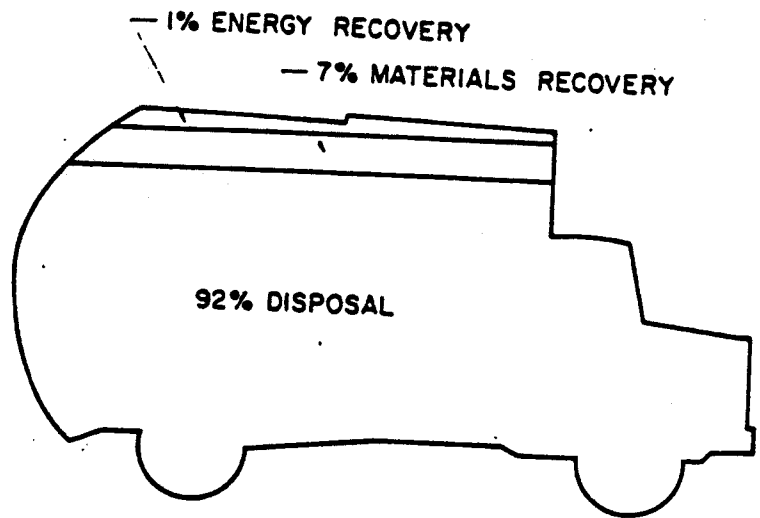
The financial feasibility of a proposed resource recovery facility is largely dependent on market commitments for the sale of recovered energy and materials products, from which revenues are earned which help offset the projected capital and operating/maintenance costs of the facility. In addition, the customer's specifications for the recovered products may dictate the recovery processes to be used and how they are to be operated. A market assessment is thus a first and important step in the planning process.

The State Health Department assisted by other State agencies and private sector will examine on a statewide basis available and potential markets for material and energy products recovered from solid waste including newsprint, corrugated, high grade papers, ferrous and non-ferrous metals, glass, and solid, liquid and gaseous fuels. Market issues investigated include location and transportation requirements, materials and energy specifications of user industries, minimum quantity requirements, pricing mechanisms, and long-term contract availability. This market assessment will be done in broad and general terms on a statewide basis; in addition, detailed regional assessments will be prepared as part of the regional planning process.

### Assessment of Recovery Potential

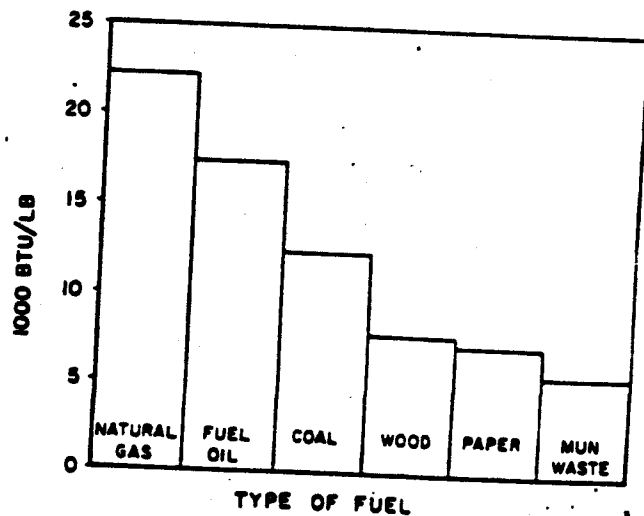
Markets for recovered materials and/or energy products will be investigated in the State. For areas where such markets are found to exist, resource recovery feasibility studies will be conducted to review various

**Figure 3  
Municipal Waste  
Management  
in 1977**



**Figure 4  
Composition of  
Municipal Solid Waste**

**Figure 5  
Comparative Heating  
Values of  
"Normal" Fuels and  
Municipal Waste**





## Assessment of Existing Facilities

**An assessment of the existing solid waste disposal and processing facilities in the State of Virginia will be prepared and updated annually. The assessment will include the following items:**

- Adequacy of facility capacity
- Compliance with the Criteria



- Environmental assessment — addressing the environmental, health and aesthetic damage caused by delaying implementation of the Criteria.
- Economic impact — development of cost estimates relating to upgrading and alternate systems to assist in establishing public works program priorities.

### Establishment of Priorities for New Facilities

Based on the findings of the State Health Department and on local planning efforts, a list of required new solid waste facilities, in order of priority, will be assembled. Highest priority will be given to facilities required to replace open dumps.



The Reynolds Aluminum Recycling Co. in Richmond, Va. redeems used aluminum beverage cans and clean household aluminum for 17 to 20¢ a pound, then recycles the metal.



# CHAPTER V: HAZARDOUS WASTE MANAGEMENT

## General

It is the intention of the State to develop, administer, and enforce a hazardous waste management program pursuant to Subtitle C of RCRA. Administration of the program will be the responsibility of the Division of Solid and Hazardous Waste Management of the State Health Department. The State will apply to the EPA for authorization to carry out such a program, in lieu of a Federal hazardous waste program in the State of Virginia, as provided for in Section 3006 of RCRA. The responsibility for administration of a solid and hazardous waste program for wastes generated by the mining industry will be carried out by the Division of Mined Land Reclamation, Department of Conservation and Economic Development.

Subtitle C of RCRA requires, within 18 months after the enactment of RCRA, that the EPA develop and promulgate hazardous waste rules in the following areas:

- Standards for criteria, identification and listing of hazardous wastes;
- Standards applicable to generators of hazardous wastes;
- Standards applicable to transporters of hazardous wastes;
- Standards applicable to owners and operators of hazardous waste treatment, storage, and disposal facilities;
- Permits for treatment, storage or disposal of hazardous wastes;
- Guidelines for authorized State hazardous waste programs; and
- Procedures for preliminary notification of hazardous waste activities.

At the present time, these guidelines, standards and criteria have not been promulgated in final form. The hazardous waste portion of the Plan is based on the proposed form of the rules, and on the language of RCRA, and may require revision when the rules are adopted in final form.

## Identification and Listing of Hazardous Wastes

### A. Criteria

RCRA requires that the EPA develop and promulgate criteria for identifying characteristics of hazardous wastes, and for listing hazardous wastes. The criteria are to take into account toxicity, persistence, and degradability in nature, potential for accumulation in tissue, and other related factors such as flammability, corrosiveness, and other hazardous characteristics.

### B. Identification and Listing

Based on the criteria developed, the EPA will promulgate regulations identifying the characteristics of hazardous waste, and listing particular hazardous wastes. This listing will establish which wastes are subject to the requirements of Subtitle C of RCRA, and therefore subject to the jurisdiction of the State's hazardous waste management program.

### C. State Participation

The State will participate in the rulemaking process by reviewing the proposed

criteria, standards and guidelines in their draft form, and commenting as appropriate.

The State may also petition the EPA to identify or list a substance as hazardous, if the State believes this is advisable and the EPA has not already done so.

## **Generation of Hazardous Wastes**

The State will develop, promulgate and adopt regulations establishing standards applicable to generators of hazardous wastes. These standards will be in conformance with the standards established by the EPA pursuant to Section 3002 of RCRA. The standards will be as necessary to protect human health and the environment, and will establish requirements for:

- recordkeeping practices that accurately identify the quantities of hazardous wastes generated, the constituents thereof, and the disposition of such wastes;
- labeling practices for containers used for the storage, transport, or disposal of hazardous wastes, that will identify accurately such wastes;

EPA Documenta Charles O'Rear



Special precautions must be taken for disposal of hazardous materials.

- appropriate containers for hazardous wastes;
- furnishing information on the chemical composition of hazardous wastes to persons transporting, treating, storing, or disposing of such wastes;
- a manifest system to assure that hazardous waste generated is treated, stored, or disposed of at an appropriate approved facility; and
- a reporting system which will inform the State Health Department of the quantities of hazardous wastes generated during a particular time period, and of the disposition of all such wastes.

## **Transportation of Hazardous Wastes**

The State will develop, promulgate and adopt regulations establishing standards applicable to transporters of hazardous wastes. These standards will be in conformance with the standards established by the EPA pursuant to Section 3003 of RCRA.

The standards will include the following:

### **A. Identification Code**

Any transporter who transports or intends to transport hazardous wastes within the State of Virginia will be required to obtain an identification code from the State Health Department. The identification code will be required to be included on:

- the manifest;
- the delivery document; and
- any hazardous materials incident report.

### **B. Recordkeeping**

Transporters will be required to maintain copies of each manifest or delivery document for not less than 3 years from the date of either transfer of the hazardous waste to another transporter, or delivery of the hazardous waste to a permitted facility.

### **C. Acceptance and Transport of Hazardous Waste**

Transporters will not be permitted to accept a shipment of hazardous waste from a generator without a manifest signed by the generator. Transporters will be required to sign the manifest acknowledging acceptance before transporting the hazardous waste.

If a hazardous waste is transported by more than one transporter, subsequent transports will not be permitted to accept or transport the waste without receiving a manifest or shipping documents.

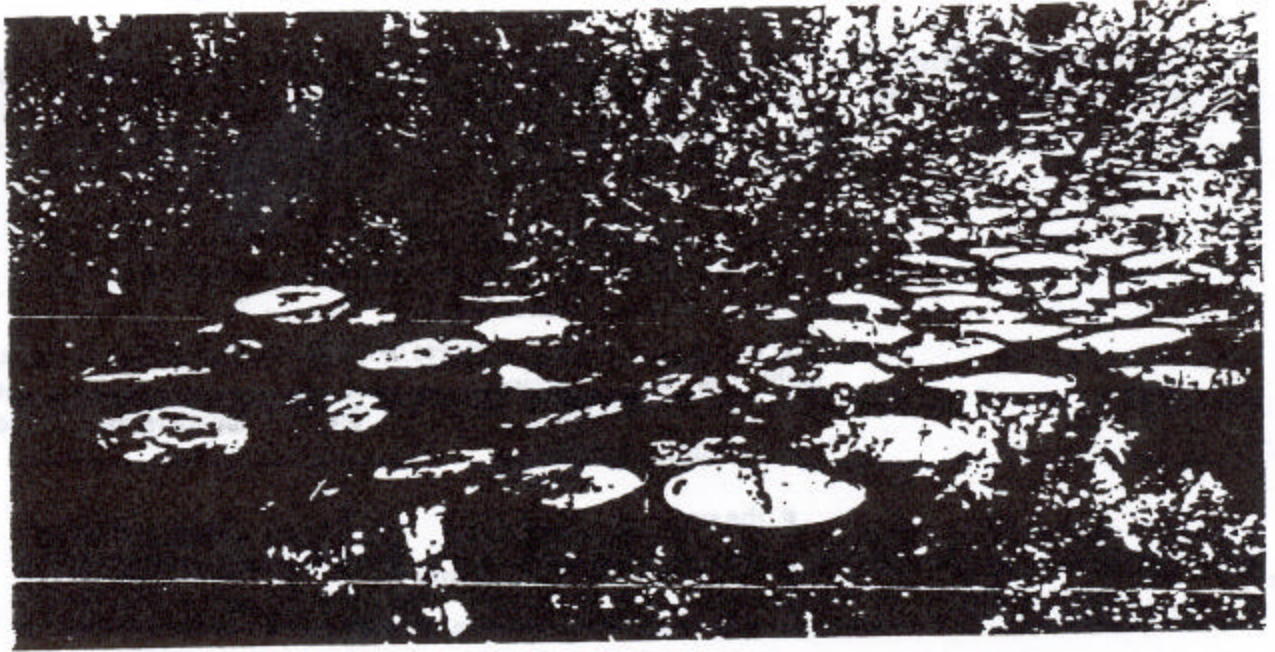
All shipment of hazardous wastes will be in containers properly labeled or marked in accordance with United States Department of Transportation (DOT) regulations. If a DOT label is lost or detached, the transporter must replace it based on the information taken from the manifest covering the shipment. Motor vehicles and drivers transporting hazardous wastes will comply with Federal Motor Carrier Safety Regulations.



Transporters will not be permitted to transport containers which are damaged or leaking.

#### **D. Compliance with the Manifest**

Each transporter will be required to assure that a copy of the manifest or information contained on the manifest (e.g., a hazardous material shipping paper, bill of lading, waybill) at all times accompanies the shipment of hazardous waste.



Discarded chemicals and paints may present some serious hazardous waste disposal problems.



If hazardous wastes are transferred between different modes of transport (air, rail, highway or water), or between different transporters, each subsequent transporter will be required to sign the manifest or delivery document.

Delivery documents shall not be used unless the original manifest is not accompanying the shipment and shall contain, at a minimum, the following:



- Name, address and identification code of the transporter;
- Name, address, and identification code of the generator;
- Name, address, and identification code of the designated permitted facility;
- Corresponding manifest document number; and
- Description and quantity of the hazardous waste.

Upon delivery of the hazardous waste to the designated permitted facility, the transporter will obtain the signature of an authorized agent of the facility on the manifest or delivery document. If the transporter cannot obtain immediate certification of delivery he will indicate on the manifest or delivery document the time and date of delivery, and the reason the manifest or delivery could not be certified upon delivery. The transporter will acquire certification on the manifest or delivery document with 5 working days of delivery.

#### **E. Delivery of Hazardous Wastes to a Designated Permitted Facility**

Hazardous wastes will be delivered to the permitted facility designated by the generator on the manifest. If a hazardous waste is removed from a transport vehicle or aircraft for purposes of blending, mixing, treating, or storing, this shall be done at a permitted facility.

#### **F. Spills**

In the event of any spill of a hazardous waste during transport, the transporter will telephone immediately the National Response Center, United States Coast Guard (800-424-8802); and the Virginia State Water Control Board's PReP team (804-257-0080); and the local governmental official predesignated as the on-scene coordinator.

The transporter will furnish the following information upon notification:

- Name of person reporting the spill;
- Name and address of transporter;
- Name and address of generator;
- Phone number where reporter can be contacted;
- Spill precautions recommended by the generator;
- Date, time, and location of the incident;
- Type of transport vehicle and mode;
- Type of incident (e.g., fire, breakage, spillage);
- Classification, name and quantity of hazardous waste involved, to the extent available; and
- The extent of injuries, if any.

Within 15 days, the transporter will be required to file a written report, in duplicate, with the Director, Office of Hazardous Materials Operations, Materials Transportation Bureau, Department of Transportation, Washington, D.C. 20590, on each spill that occurred during the course of transportation. Duplicate reports shall be filed with the State Health Department and the State Water Control Board. DOT Form F 5800.1, available from the Office of Hazardous Materials Operations, shall be used as the basic reporting document.

The following information shall be included:

- Location of the spill in relation to surface waters, public water supply, groundwater, wildlife habitats, and agriculture production areas, if known;
- Quantity of hazardous waste removed and disposition of the waste; and
- Disposition and quantity of unremoved hazardous waste.

The transporter will be required to clean up all spilled hazardous wastes, or take such action as may be required so that the spilled waste no longer represents a hazard to human health or the environment. Local officials will be informed by the State Health Department of precautions to be taken on adjacent properties pending clean-up.

In the event that any spills of hazardous materials or materials presumed to be hazardous be discovered by persons other than transporters, these persons should notify the State Water Control Board (804) 257-0080. Any actions arising from such a notification will be undertaken by the Board at its discretion and in accordance with procedures, rules and regulations prescribed by it. The State Department of Health will assist the Board when requested.

### **G. Placarding/Marking of Vehicles**

Transport vehicles containing hazardous wastes which are also DOT hazardous materials will not be moved unless the vehicle is placarded in accordance with 49 CFR 172, subpart F.

Transporters will mark each motor vehicle used for the transport of hazardous waste if the motor vehicle is required to be placarded, or if the motor vehicle contains more than 1,000 pounds of hazardous waste. The marking shall include:

- Name of transporter; and
- Location of the carrier's principal office, or of the vehicle's customary base.

The marking must:

- Appear on both sides of the vehicle;
- Be in letters that contrast sharply in color with the background; and
- Be legible during daylight hours from a distance of 50 feet while the vehicle is stationary.

The marking may consist of a removable device meeting the above identification requirements.

### **Hazardous Waste Treatment, Storage, and Disposal**

The State will develop, promulgate and adopt regulations establishing standards applicable to the owners and operators of hazardous waste treatment, storage, and disposal facilities. These standards will be in conformance with the standards established by the EPA pursuant to Section 3004 of RCRA, and pertinent State regulations, and will include requirements for:

- maintaining records of all hazardous wastes which are treated, stored, or disposed of, and the manner in which such wastes were treated, stored, or disposed of;
- satisfactory reporting, monitoring, and inspection and compliance with the manifest system;
- the location, design, and construction of such hazardous waste treatment, storage, or disposal facilities;
- treatment, storage, or disposal of all wastes received pursuant to such operating methods, techniques and practices, including compatibility of wastes, as may be satisfactory to the State Health Department;
- contingency plans for effective action to minimize unanticipated damage from the treatment, storage, or disposal of any such hazardous waste;
- the maintenance of operation of such facilities and requiring such additional qualifications as to ownership, continuity of operation, training, and financial responsibility as may be necessary or desirable;
- compliance with applicable permitting requirements; and
- closure procedures and post-closure care for a period of at least 20 years in case of landfills.

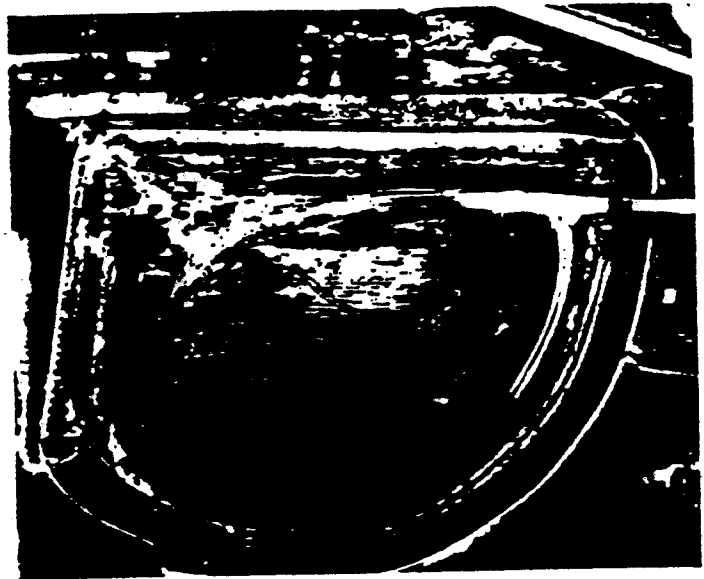
### **Treatment, Storage, or Disposal Permits**

The State will develop, promulgate, and adopt permit requirements applicable to the owners and operators of facilities for the treatment, storage, and disposal of hazardous wastes. These permit requirements will be in conformance with the regulations established by the EPA pursuant to Section 3005 of RCRA and pertinent State regulations. When the State Health Department develops and adopts regulations for permit requirements applicable to owners and operators of facilities for the treatment, storage, and disposal of hazardous wastes, coordination with the State Water Control Board NPDES Permit and No-Discharge Certificate programs will be included.

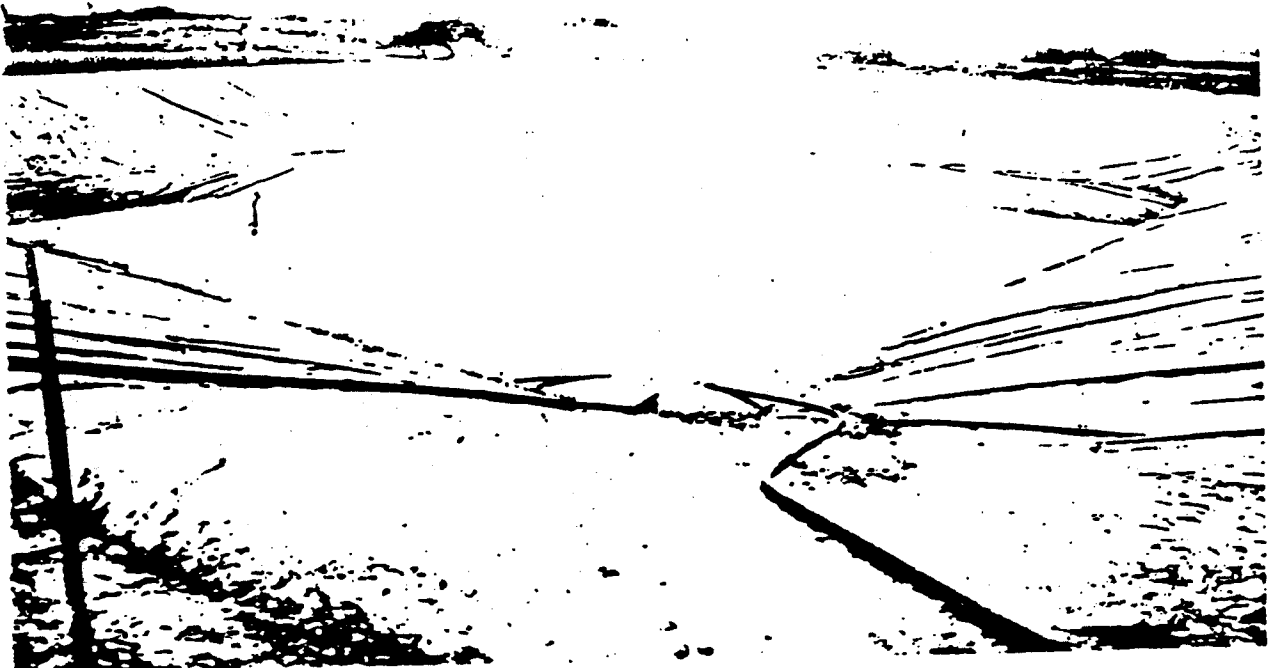
Permit applications shall contain such information as may be required under regulations promulgated by the State, including:

- estimates with respect to the composition, quantities, and concentrations of any hazardous waste, or any combination of such hazardous waste and other solid waste, proposed to be disposed of, treated, or stored, and the time, frequency, or rate at which such waste is proposed to be disposed of, treated, or stored; and
- the site at which such hazardous waste, or the products of treatment of such hazardous waste, will be disposed of, treated, or stored.

Special containment site for disposal of hazardous wastes in New York State.



Chemical waste holding basin.



Upon determination, by the State Health Department, of compliance by a facility with applicable requirements, a permit will be issued for the facility. In the event the permit applicant proposes modification of the facility, or in the

event the State Health Department requires modification, the permit shall specify the time allowed to complete the modifications.

A facility having a permit under this section will have such permit revoked upon determination by the State Health Department of noncompliance with applicable rules and regulations.

## **Authorized State Program**

The State of Virginia intends to administer and enforce a hazardous waste program mandated by the enactment of the Solid Waste Management Act (Article 3, Chapter 6, Title 32.1, Code of Virginia) by the General Assembly, described in greater detail in Chapter VI, and pursuant to Subtitle C of RCRA, in lieu of the Federal hazardous waste program within the State. The State's program should be in conformance with the guidelines for such programs to be promulgated by the EPA, and meet the criteria discussed below.

### **A. Equivalency**

Virginia's hazardous waste program will be equivalent to the Federal program and will encompass the following elements:

- Legislative Authority;
- Published Regulations;
- Permit Mechanism;
- Manifest System;
- Identification of Resources;
- Interagency Delineation of Responsibilities; and
- Public Participation.

### **B. Consistency**

Virginia's program will be consistent with the Federal program and with other State programs having received full authorization under Section 3006(b) of RCRA.

Federal guidelines mandate that hazardous waste disposal sites meet certain stringent criteria.





The program will provide for the free movement of hazardous waste across the State's boundaries, provided such wastes are destined for treatment, storage, or disposal facilities having hazardous waste permits under an EPA approved State program. The program will apply the same standards to hazardous wastes originating within Virginia as to hazardous wastes originating elsewhere.

The State hazardous waste program will provide standards which are similar to Federal standards and which will protect public health and the environment to substantially the same degree as Federal standards.

## CHAPTER VI: LEGISLATIVE REQUIREMENTS

**General**     **The Plan identifies existing State legislative authorities for solid waste management and will provide for the identification and acquisition of additional legislative authorities and regulatory, administrative and judicial powers as may be necessary to meet the requirements of RCRA. The Plan will also include a schedule for obtaining these authorities and powers.**

Specifically, the Plan proposes:

- a review of all existing statutes pertinent to the contracting for solid waste services or facilities, and to the sale of recovered materials;
- to review pertinent statutes for conformance with the State Plan, and the requirements of RCRA; and
- to make recommendations for proposed changes of statutes for consideration by the General Assembly.

**Existing Legislation**     **The solid and hazardous waste management program in its multiplicity is based on various State laws and is governed by rules and regulations issued by various State agencies.**

Title 32, Code of Virginia, provides the following:

- Establishes the authority of the State Health Department to regulate solid and hazardous waste disposal.
- Requires that the cities and counties of the State plan for and provide solid waste disposal facilities.
- Sets forth, via rules and regulations, minimum operating standards to assure protection of the public health and general environment.

This title will remain in effect until October 1, 1979, at which time the newly enacted legislation will become the basis for the legislative mandates of the State Health Department.

Existing legislation governing those aspects of solid waste management which are under purview of the other State agencies remains in force and continues to address:

- the authority of the State Water Control Board to regulate disposal of water, wastewater and industrial treatment sludges and to protect groundwater;
- the authority of the State Air Pollution Control Board to regulate emissions from stationary sources to include incinerators, sanitary landfills and other facilities producing hazardous or noxious emissions;

- the authority of the Division of Mined Land Reclamation to regulate refuse disposal associated with the mining industry.

### **Legislation in Effect After October 1, 1979**

In February 1979, The General Assembly enacted the recodified version of the Virginia Health Code as Title 32.1. Chapter 6, Article 3 deals with solid waste management and places the State in a position to administer effectively its resource recovery and hazardous management programs and would enable the State to obtain full authorization from EPA under Section 3006, RCRA. The full text of the Article is shown in Appendix A to this Plan.

### **Future Legislation**

#### **A. Long-Term Supply Contracts**

Development of private sector resource recovery facilities generally requires long-term commitments by local governments for the supply of solid waste. Legislation contemplated will provide that no local government within the State will be prohibited under State or local law from entering into long-term contracts for the supply of solid waste to resource recovery facilities.

It is recognized that the State and State agencies may have limited ability to modify local procurement laws. Therefore, cooperation of local governments and public education and participation are important in meeting this requirement.

#### **B. Use of Recovered Materials**

Suggested legislation will be developed for consideration by the General Assembly, which will require that items containing the highest percentage of recovered materials practicable, consistent with reasonable levels of competition, availability, performance and cost, be purchased when Federal funds are used for such purpose.

#### **C. Further Considerations**

During the next year the State Health Department will further study existing State statutes and will make suggestions for legislative additions which will assure that the State as well as local government may accommodate to resource recovery practices and RCRA requirements.

## CHAPTER VII: STATE POLICY DETERMINATIONS

**General** Development and implementation of the Plan require that the State consider the realignment of certain basic policy decisions in the areas of resource recovery and solid waste management and disposal. Such policy consideration will be required in the following areas:

- Resource recovery development;
- Ground water degradation;
- Source separation;
- Sludge utilization;
- Pollutant allocation tradeoffs;
- Facility postclosure responsibility;
- Franchise area considerations;
- Due process considerations; and
- Intermunicipal and regional cooperation.

### **Resource Recovery Development**

The extent to which the goal of resource conservation will influence choices between land disposal and resource recovery will be considered by the State. The potential short term economies of land disposal versus the long term benefits of recovery will be evaluated in the proposed planning studies to be conducted by the regional planning agencies.

### **Ground Water Degradation**

A policy on acceptable levels of groundwater degradation will be developed by the Water Control Board. The importance and vulnerability of local groundwater resources will be considered in making a choice between leachate collection and treatment, with its attendant technical uncertainties, and a permissible degradation approach relying on natural attenuation, dilution and dispersion.

### **Source Separation**

A State policy on the encouragement of source separation to save landfill capacity, facilitate resource recovery, and reduce pollutant loading, will be developed.

### **Sludge Utilization**

The State Water Control Board is currently considering potential uses of wastewater treatment plant sludges. Consideration will be given to the co-disposal (co-incineration) of sludges with fuel derived from solid waste where such sludge facilities currently exist or are proposed.

### **Pollutant Allocation Tradeoffs**

Various solid waste management alternatives are expected to result in differing pollutant loadings of the air, groundwater, and surface waters. These

impacts will be investigated and evaluated as a part of Plan development, and identifiable tradeoffs will be developed by the State Air Pollution Control Board, the State Water Control Board and the USEPA.

**Facility Postclosure  
Responsibility**

A State policy on owner/operator responsibility for remedying pollution emanating from a closed solid waste facility will be developed. Use of escrow funds, bonding, user charge accumulations, and State sharing of remedial costs will be considered.

**Franchise Area  
Considerations**

When a regional plan identifies a limited number of facilities which will be permitted in a given geographic area, the issue of franchise control versus free market price competition is raised. The State will assure that these matters are considered in the formulation of regional plans.

**Due Process  
Considerations**

The need for establishment of new facilities, and the upgrading of existing facilities, will be in accordance with considerations of due process in facility site selection. This process will include public hearings held either by the local governmental authorities in connection with the land-use permit system or, in the absence of local land-use ordinances, by the Commissioner of Health, to insure that the local objections to the facilities may be heard and evaluated in an orderly manner.

**Intermunicipal and  
Regional  
Cooperation**

A State policy encouraging regional solid waste management facilities will be developed. Determination of the availability of acceptable alternatives to open dumps should not depend solely on a local decision to exclude solid waste from other communities.

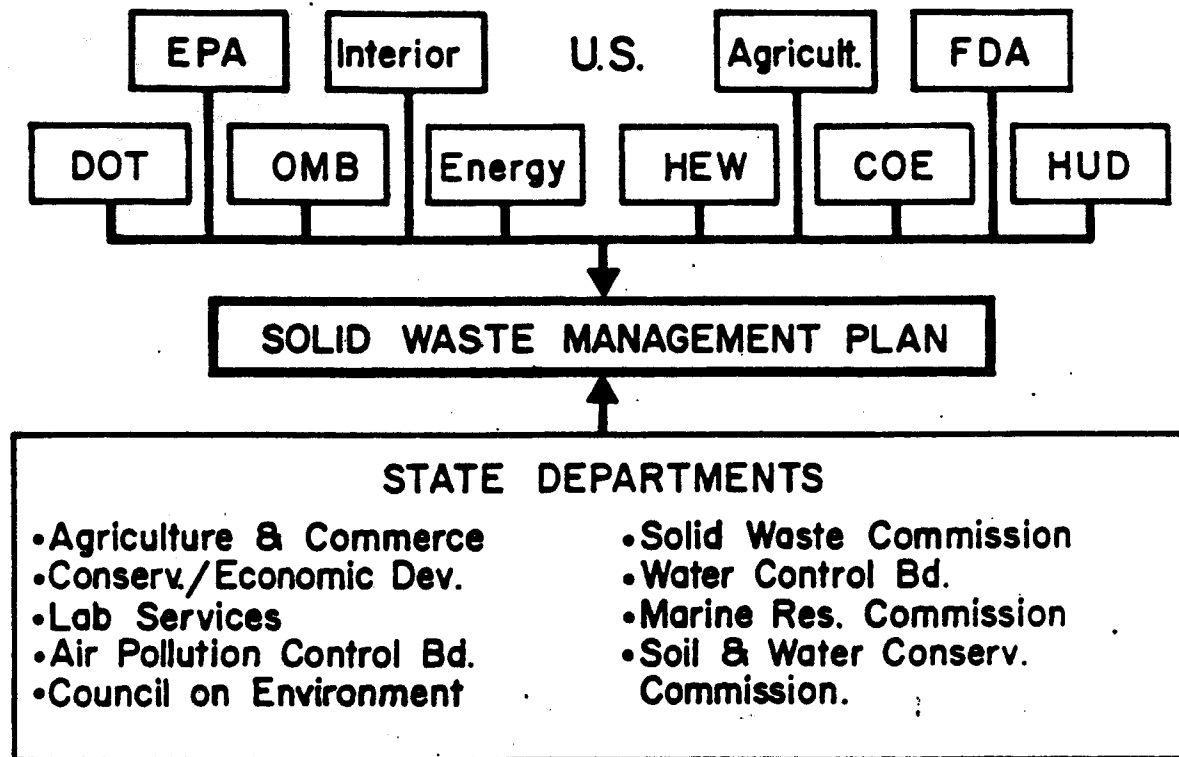


Resource recovery facility in Bridgeport, Conn., run by the Connecticut Resources Recovery Authority.



## CHAPTER VIII: COORDINATION WITH OTHER AGENCIES AND PROGRAMS

**General** The Plan will be developed in coordination with Federal, State, regional, and local programs for air quality, water quality, water supply, wastewater treatment, energy conservation, pesticide control, ocean protection, toxic substance control, noise control, radiation control, highway safety and transportation of hazardous materials.

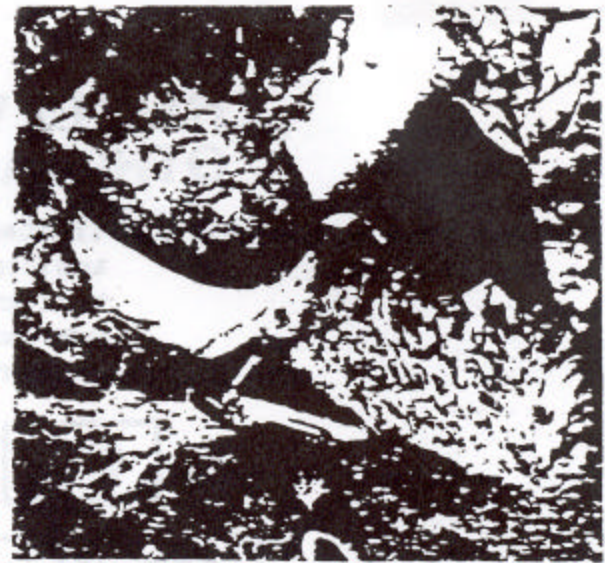


**Figure 7**  
**Interaction of Federal and State Agencies in Solid Waste Management Planning**

Federal agencies and programs which will require coordination include:

- Environmental Protection Administration
  - Water (Sections 208, 402 and 201 of the Federal Water Pollution Control Act of 1972)
  - Air (the Clean Air Act, as amended)
  - Water Supply
  - Pesticides (Section 19 of the Federal Insecticide, Fungicide and Rodenticide Act of 1972, as amended)
  - Toxic Materials
- Corps of Engineers (Section 404 of FWPCA)
- Department of Transportation
- Housing and Urban Development (Section 701 of Title IV of the Act)
- Office of Management and Budget (OMB Circular A95)
- Department of Energy
  - National Energy Act
  - The State Energy Planning and Management Act (proposed)

- Department of Health, Education and Welfare
- Department of Interior — Surface Mining Control and Reclamation Act of 1977 (PL95-87).
- Department of Agriculture
- Food and Drug Administration



Landfill leachate must be controlled to protect water quality.

State agencies which have statutory authority, and/or solid waste program involvement and with which the State Health Department will coordinate its activities include:

- Department of Agriculture and Commerce
- Department of Conservation and Economic Development
- Division of Consolidated Laboratory Services
- Office of Emergency and Energy Services
- State Air Pollution Control Board
- State Council on the Environment
- State Solid Waste Commission
- State Water Control Board
- Virginia Marine Resources Commission
- Virginia Soil and Water Conservation Commission

## Water Quality

Development of an adequate State solid waste management program requires continuing coordination with the Water Control Board, and with Divisions of the State Health Department.

### A. Section 208

Solid waste planning will be coordinated with programs under Section 208 of the Clean Water Act, as amended (33 USC Section 1288). Solid waste management activities being conducted by water quality planning and management agencies designated under Section 208 will be reviewed in identifying agencies for solid waste management planning and implementation. Where feasible, identification of such agencies has been considered in the identification of responsible agency processes discussed in Chapter II.

Where the solid waste management and water quality planning agencies are to be separate entities, strong coordination provisions will be developed including procedures for:

- Use of a common data base.
- Use of compatible report formats, maps, scales, legends, etc.
- Use of common geographic boundaries, where feasible.

- Use of consistent sludge management policy.
- Mutual identification of legislative changes needed for implementation.
- Coordination of implementation strategies.

## **B. NPDES**

Coordination will be provided with the National Pollutant Discharge Elimination System (NPDES), established on Section 402 of the Clean Water Act, as amended (33 USC Section 1342), and as administered by the State Water Control Board. The classification of a facility as part of the inventory and the issuance of a compliance schedule for closing or upgrading of open dumps shall be timed, where practicable, to coordinate with the issuance of a new or revised NPDES permit for such a facility.

## **C. Sewage Sludge Disposal**

Solid waste planning will be coordinated with municipal sewage sludge disposal planning activities authorized by Section 405 of the Clean Water Act, as amended (33 USC Section 1345), administered in Virginia by the State Water Control Board, and with the program for construction grants for publicly owned treatment works under Section 201 of the Act (33 USC Section 1281).

## **D. Pretreatment**

Coordination with pretreatment activities under Section 307 of the Act (33 USC Section 1281) will be provided for in the solid waste planning process.

## **E. Safe Drinking Water Act**

Solid waste planning will be coordinated with agencies conducting assessments of the impacts of surface impoundments on underground sources of drinking water under the authority of Section 1442(a)(8)(C) of the Safe Drinking Water Act (42 USC Section 300 j-1).

Coordination will also be provided for underground injection control programs (40 CFR Part 146) carried out under the authority of the Safe Drinking Water Act (42 USC Section 300 f), and with the designation of sole source aquifers under Section 1424 of that Act.

## **F. State Water Control Law**

Coordination will be provided with the No-Discharge Certificate program administered by the State Water Control Board under authority of the State Water Control Law (Chapter 3.1 of Title 62.1 of the Code of Virginia, as amended) mainly in the area of agricultural wastes, land application, and other non-point sources of potential pollution of any State waters.

## **Air Quality**

**Solutions to certain solid waste management problems will involve the construction of facilities and/or the adoption of practices which will be subject to review and control by air programs under new source performance standards and under State implementation plans.**

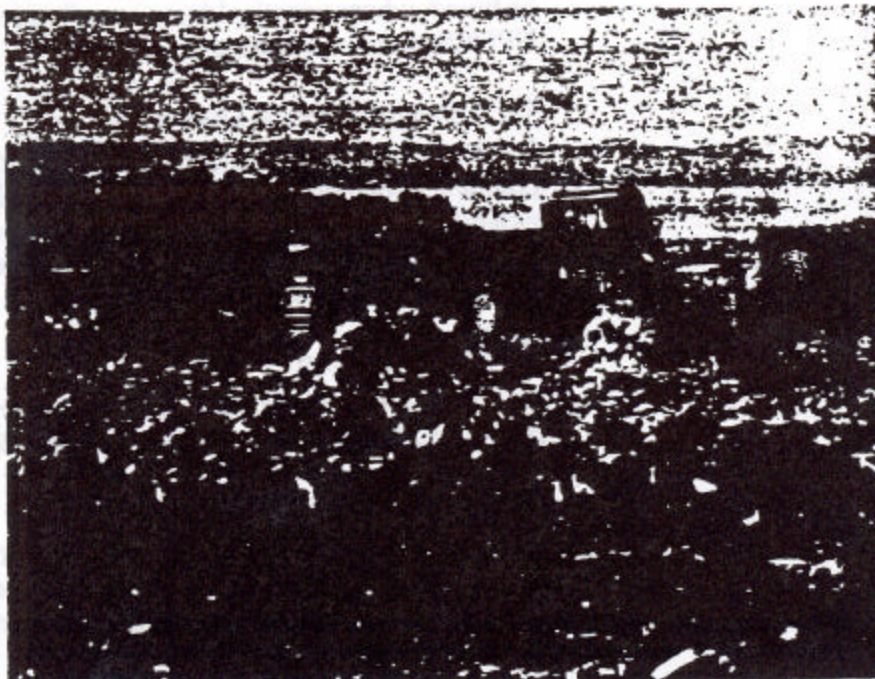
The program administered by the State Health Department will identify all proposed processing and disposal facilities which will be subject to new source performance standards. Early review of these facilities by the State Air Pollution



Control Board will be requested to prevent significant deterioration of the air quality and to resolve trade-off considerations.

Coordination will be established with air implementation plans with regard to:

- impact on future facility alternatives; and
- residues from emission control devices.



Uncontrolled burning at landfills can have a serious impact on air quality.

## Special Wastes

Special wastes which may be the purview of other programs will be addressed by the Plan.

- Pesticide and pesticide container disposal will be coordinated with the concerned agricultural, environmental, regulatory and health agencies.
- Highway clearing waste disposal will be coordinated with the appropriate highway or transportation program.
- Other wastes, such as toxic materials and dredge spoil may require coordination.
- Disposal of septage will be in accordance with separate regulations to be promulgated by the State Board of Health.



## CHAPTER IX: REVIEW AND APPROVAL OF REGIONAL PLANS

**General** The Plan for solid waste management facilities and services will be essentially a composite of regional plans, with State overview establishing policy issues, and a State established overall strategy and allocation of waste management resources. The State overview function will ensure that resultant regional plans are compatible. The State will arbitrate among regions to encourage the aggregation of economically viable concentrations of recoverable resources, and to encourage equitable access to land suitable for disposal facilities.

**Regional Plan Content** Regional plans, whether prepared by public or private, or by statewide or regional, entities will be required to provide site-specific facility recommendations in a timely fashion.

The State intends to provide guidelines for use by local and regional solid waste management agencies in the development of regional plans. An outline of the proposed guidelines is shown on Table 4.

**TABLE 4**  
**Guidelines for Use by Local and Regional**  
**Solid Waste Management Agencies**  
**In the Development of Regional Plans**

- I. Introduction**
  - A. Purpose of guidelines
  - B. State objectives
  - C. State role and responsibilities
  - D. Local and regional objectives
  - E. Public and private participation
- II. Plan Preparation and Implementation**
  - A. Planning process
    - 1. Evaluation of current solid waste management facilities
    - 2. Solid waste quantities and characteristics
    - 3. Materials and energy market survey
    - 4. Identification of technical needs
    - 5. Evaluation and selection of alternative systems
    - 6. Institutional arrangements (legal, financial and administrative)
    - 7. Selection and siting of facilities
    - 8. Implementation schedule
    - 9. Adoption of solid waste management plan
- III. Additional Guidance and Information**
  - A. Types of solid waste to be considered
  - B. Provisions of RCRA
  - C. Distribution of Federal planning funds
  - D. Integration with State solid waste plan
  - E. Technical data



Based in part upon the availability of Federal funds, the State intends to coordinate the establishment of planning priorities. The State will provide financial assistance for regional and local planning as Federal funds are made available, on the basis described in Chapter II, Funding Distribution and Priority.

### **Summary of Approved Regional Plans**

The Plan will include details of the regional plans as such are forthcoming and are endorsed by the implementation agencies and the State.



A mobile recycling unit collects aluminum cans — and spectators — at a neighborhood shopping center.



## CHAPTER X: PUBLIC PARTICIPATION

**General** In the formulation of the Plan, it is the intention that the public participate fully in development and implementation, as well as in the development and implementation of the regional plans.

To accomplish this the State will:

- maintain a current list of agencies, organizations, and individuals affected by or interested in the Plan;
- encourage the establishment of regional and local advisory groups to make recommendations on policy and program decisions to officials responsible for implementation; and
- provide depositories of relevant information in locations convenient to the interested or affected public.

**Consultation** State and regional planning agencies will provide information and consult with the public and their advisory groups on Plan development and implementation.

Planning agencies will provide for public participation by:

- publicizing information in appropriate news media;
- placing information in convenient depositories as discussed above;
- sending information directly to agencies, organizations and individuals on the list maintained for that purpose; and
- preparing and making public a summary of public participation in the planning efforts.

Community sentiments regarding waste management plans are voiced at public hearings.



**Public Hearings** State and regional planning agencies will conduct public hearings (and public meetings where there is sufficient interest) in accordance with applicable State

and regional administrative procedures. The hearings and meetings will solicit reactions and recommendations from interested or affected parties, and explain major elements of the proposed plans. Following such meetings and public hearings a summary of agency response will be prepared and made available to the public.

### **Public Participation in Administrative Procedures**

Where there is sufficient interest, the State Health Department will conduct public meetings regarding the formulation of the work program, discussed in Chapter X, and will also conduct such meetings in connection with facility permit approval.



Operations at a large north-eastern landfill facility.

### **Public Participation in State Regulatory Development**

Public hearings, as required by the Virginia Administrative Process Act (Section 9-6.14:1 *et seq.*, Code of Virginia), will be conducted on proposed rules and regulations, and applicable administrative procedures, to solicit reactions and recommendations. Following the public hearing, a summary of agency response to public views will be prepared and made available to the public.

In advance of the hearings and meetings, information will be prepared on the proposed rules and regulations. The information will be mailed to interested agencies, organizations, and individuals, and placed in the information depositories.



# CHAPTER XI: PLAN ADOPTION, APPROVAL AND REVISION

**General** As prescribed by RCRA, the Plan will be adopted by the Commonwealth of Virginia prior to final submission to the EPA for approval.

**Plan Content** The Plan includes overall policy positions of the State on solid waste management and resource recovery (see Chapter VII), which are submitted for EPA approval.

The Plan also incorporates, by reference, the regional plans developed in accordance with the requirements of Chapter IX, and the compliance schedules discussed in Chapter II.

As they are developed, the actual text of the regional plans and compliance schedules will be available for inspection at the office of the Division of Solid and Hazardous Waste Management, State Health Department, Madison Building, 109 Governor Street, Richmond, Virginia 23219.

**Adoption** The State Health Department will take the following steps to cause the formal adoption of the plan:

- A preliminary draft of the Plan has been distributed to pertinent State agencies in September 1978 for review and comment.
- A preliminary draft of the Plan has been submitted to the Regional Administrator, Region III of the EPA in October 1978 for review and comment.
- A preliminary draft of the Plan has been distributed to regional agencies, counties and cities prior to the conduct of a series of regional public meetings throughout the State to discuss the Plan (October-November 1978).
- Following the receipt of State agency, EPA, regional and local comment, a revised draft of the Plan has been prepared in December 1978 for submission to the State Board of Health.
- Formal public hearings were held by the Board in December 1978 and April 1979.
- Appropriate recommendations for revisions to the Plan have been made and are being submitted to Board for approval.
- The procedures as set forth in the Virginia Administrative Process Act will be followed for adoption of the Plan.

## A. Review by the State

The Plan will be reviewed by the State and, where necessary, revised and readopted not less frequently than every three years.



## **B. Adoption Timing**

The adopted Plan will be submitted to the EPA at the end of each grant year, as required by the grant regulations.

State and regional reviews will be timed so that timely consultation is made with regard to the specific actions recommended.

## **Approval and Actions by the Environmental Protection Agency**

Within six months after the adopted Plan has been submitted for approval, the Administrator will approve or disapprove the Plan. The Plan will be approved if:

- it meets the requirements of RCRA Sections 4003(1), (2), (3) and (5), and of the EPA Guidelines which address these sections; and
- it contains appropriate provisions for revision.

Once approved, the Plan will be reviewed from time to time by the Administrator to determine if revisions or corrections are required to bring it into compliance with the then current Guidelines, including the requirements which address Sections 4003(4) and (6).

The State will be provided with an opportunity for an appeal and public hearing on such revisions and corrections.

## **A. Financial Assistance**

If the Plan continues to be eligible for approval, and is being implemented by the State, then the Administrator will approve applications for financial assistance under subtitle D of RCRA.

If approval is withdrawn, Federal financial and technical assistance will be withheld, except that technical assistance needed to obtain reinstatement of approval will continue. Financial and technical assistance will resume when approval is reinstated.

## **B. Work Program**

An annual work program will be submitted, by the State Health Department, for review by the EPA Regional Administrator to determine whether the Plan is being implemented by the State.

The Administrator and the State will agree on the contents of the annual work program, considering State initiatives and priorities, in light of the goals of RCRA. The annual work program represents the obligation incurred by the State in accepting financial assistance.

The annual work program will include the following items by reference:

- regional and local solid waste management plans;
- plans for the development of facilities and services; and
- compliance schedules for upgrading or closing open dumps.



The annual work program will itemize the distribution of Federal funds to agencies responsible for the development and implementation of the Plan.

### **Plan Revision**

The Plan will contain procedures for revision subject to the public participation procedures discussed in Chapter X, and the Virginia Administrative Process Act.

The Plan will be revised whenever it is determined that:

- the Plan is not in compliance with revised regulations governing minimum requirements for State plans;
- the Plan is inadequate for the purposes of Federal guidelines; or
- revision is otherwise necessary.



A football field has been built on a reclaimed portion of the Fairfax County landfill (above), and this golf course (below) was once a town dump.





## APPENDIX A: SOLID WASTE MANAGEMENT LEGISLATION (CHAPTER 6, TITLE 32.1, CODE OF VIRGINIA)

### ARTICLE 3.

#### Solid and Hazardous Waste Management

32.1-177. Definitions. — As used in this article unless the context clearly requires a different meaning:

1. "Disposal" means the discharge, deposit, injection, dumping, spilling, leaking or placing of any solid waste or hazardous waste into or on any land or water so that such solid waste or hazardous waste or any constituent thereof may enter the environment or be emitted into the air or discharged into any waters, including ground waters.
2. "Federal acts" means United State Public Law 94-580, entitled the Resource Conservation and Recovery Act, any other acts of Congress providing Federal funds for solid and hazardous waste management and any subsequent amendment to such Act or acts.
3. "Hazardous waste" means a solid waste or combination of solid wastes which, because of its quantity, concentration or physical, chemical or infectious characteristics, may:
  - (a) cause or significantly contribute to an increase in mortality or an increase in serious irreversible or incapacitating illness or
  - (b) pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported, disposed of, or otherwise managed.
4. "Hazardous waste generation" means the act or process of producing hazardous waste.
5. "Hazardous waste management" means the systematic control of the collection, source separation, storage, transportation, processing, treatment, recovery and disposal of hazardous waste.
6. "Manifest" means the form used for identifying the quantity, composition, origin, routing and destination of hazardous waste during its transportation from the point of generation to the point of disposal, treatment or storage of such hazardous waste.
7. "Open dump" means a site on which any solid waste or hazardous waste is placed, discharged, deposited, injected, dumped or spilled so as to create a nuisance or so as to pose a substantial present or potential hazard to human health or the environment, including the pollution of air, land, surface water or ground water.
8. "Person" includes, in addition to the entities enumerated in paragraph 4. of 32.1-3, a governmental body and municipal corporation.
9. "Resource conservation" means reduction of the amounts of solid waste that are generated, reduction of overall resource consumption and utilization of recovered resources.
10. "Resource recovery" means the recovery of material or energy from solid waste.
11. "Resource recovery system" means a solid waste management system which provides for collection, separation, recycling and recovery of solid wastes, including disposal of nonrecoverable waste residues.
12. "Sanitary landfill" means a disposal facility for solid or hazardous waste so located, designed and operated that it does not pose a substantial present or potential hazard to human health or the environment, including pollution of air, land, surface water or ground water.
13. "Sludge" means any solid, semisolid or liquid wastes with similar characteristics and effects generated from a public, municipal, commercial or industrial wastewater treatment plant, water supply treatment plant, air pollution control facility or any other waste producing facility.
14. "Solid waste" means any garbage, refuse, sludge and other discarded material, including solid, liquid, semi-solid or contained gaseous material, resulting from industrial, commercial, mining and agricultural operations and from community activities but does not include (i) solid or dissolved material in domestic sewage, (ii) solid or dissolved material in irrigation return flows or in industrial discharges which are sources subject to a permit from the State Water Control Board, or (iii) source, special nuclear, or byproduct material as defined by the Federal Atomic Energy Act of 1954, as amended.
15. "Solid waste management" means the systematic administration of activities which provide for the collection, source separation, storage, transportation, transfer, processing, treatment and disposal of solid waste or resource recovery.



16. "Treatment" means any method, technique or process, including incineration or neutralization, designed to change the physical, chemical or biological character or composition of any hazardous waste so as to neutralize such waste or so as to render such waste nonhazardous, safer for transport, amenable to recovery, amenable to storage or reduced in volume. Such term includes any activity or processing designed to change the physical form or chemical composition of a hazardous waste so as to render it nonhazardous.

32.1-178. Powers and duties of Board. — The Board is responsible for carrying out the purposes and provisions of this article and compatible provisions of Federal acts and is authorized to:

1. Exercise general supervision and control over solid and hazardous waste management activities in this Commonwealth.
2. Provide technical assistance and advice concerning all aspects of solid and hazardous waste management.
3. Develop and keep current a State solid and hazardous waste management plan and provide technical assistance and advice or other aid for the development and implementation of local or regional solid and hazardous waste management plans.
4. Promote the development of resource conservation and resource recovery systems and provide technical assistance and advice or resource conservation, resource recovery and resource recovery systems.
5. Collect such data and information as may be necessary to conduct the State solid and hazardous waste program, including data on the identification of and amounts of waste generated, transported, stored, treated or disposed of and resource recovery.
6. Require any person who generates, collects, transports, stores or provides treatment or disposal of a hazardous waste to maintain such records, manifest and reporting system as may be required pursuant to federal statute or regulation.
7. Designate, in accordance with criteria and listings identified under federal statute or regulation, classes, types or lists of waste which it deems to be hazardous.
8. Consult and coordinate with the heads of any other appropriate State and federal agencies, any appropriate independent regulatory agencies and any other appropriate governmental instrumentalities for the purpose of achieving maximum effectiveness and enforcement of this article while imposing the least burden of duplicative requirements on those persons subject to the provisions of this article.
9. Make application for such federal funds as may become available under federal acts and to transmit such funds when applicable to any appropriate person.
10. Promulgate such regulations as may be necessary to carry out its powers and duties and the intent of this article and the federal acts.

32.1-179. Advisory committees. — The Governor shall appoint such advisory committees as he may deem necessary to aid in the development of an effective solid and hazardous waste management program.

32.1-180. Permits. — A. On and after the effective date of regulations promulgated pursuant to this article, which date shall not be less than six months after promulgation, no person shall:

1. Operate any sanitary landfill or other facility for the disposal of solid waste without a permit therefor from the Commissioner.
  2. Transport, store, provide treatment for, or dispose of a hazardous waste without a permit therefor from the Commissioner.
  3. Own, operate or allow to be operated on his property an open dump unless such person is the holder of a conditional permit provided for in subsection D. of this section.
- B. The Commissioner may, in his discretion, waive the requirement for a permit to operate a sanitary landfill or other facility for the disposal of solid waste when he determines that the facility for the disposal of solid waste is subject to regulation by the State Water Control Board.
- C. Any person generating, transporting, storing, providing treatment for, or disposing of a hazardous waste shall report to the Commissioner, by such date as the Board specifies by regulation, the following: (i) his name and address, (ii) the name and nature of the hazardous waste, and (iii) the fact that he is generating, transporting, storing, providing treatment for or disposal of a hazardous waste.

D. The Commissioner may issue a conditional permit for the operation of any open dump in use or being operated on October one, nineteen hundred seventy-nine. Each such conditional permit shall specify either:

1. a schedule for closure of the open dump or
2. a schedule delineating appropriate remedial action which will lead to conversion of the open dump into a sanitary landfill.



In no event shall any such schedule extend beyond June thirty, nineteen hundred eighty-three, and no conditional permit shall be valid after June thirty, nineteen hundred eighty-three. The Commissioner may revoke any conditional permit and order the closure of any open dump for failure to comply with the schedule specified in the conditional permit for such open dump or for any reason set forth in 32.1-181.

E. Any permit may contain such conditions or requirements as are necessary to prevent a substantial present or potential hazard to human health and the environment.

32.1-181. Revocation and amendment of permits. — A. Any permit issued by the Commissioner pursuant to this article may be revoked when any of the following conditions exist:

1. The permit holder violates any regulation adopted pursuant to this article so as to pose a substantial present or potential hazard to human health or the environment.

2. The sanitary landfill, open dump or other facility used for disposal of solid waste is maintained or operated in such a manner as to pose a substantial present or potential hazard to human health or the environment.

3. The sanitary landfill, open dump or other facility used for the disposal of solid waste, because of its location, construction or lack of protective construction or measures to prevent pollution, poses a substantial present or potential hazard to human health or environment.

4. Leachate or residues from the sanitary landfill, open dump or other facility used for the disposal of solid waste pose a threat of contamination or pollution of the air, surface waters or groundwater in a manner resulting in a substantial present or potential hazard to human health and the environment.

5. The person to whom the permit was issued abandons, sells, leases or ceases to operate the facility permitted.

6. The facilities used in the transportation, storage, treatment or disposal of hazardous waste was operated, located, constructed or maintained in such a manner as to pose a substantial present or potential hazard to human health or the environment, including pollution of air, land, surface water or ground water.

7. Such protective construction or equipment as is found to be reasonable, technologically feasible and is necessary to prevent substantial present or potential hazard to human health and welfare or the environment has not been installed at a facility used for the storage, treatment or disposal of a hazardous waste.

B. The Commissioner may amend or attach conditions to a permit when:

1. There is a significant change in the manner and scope of operation which may require new or additional permit conditions or safeguards to protect the public health and environment.

2. There is found to be a possibility of pollution causing significant adverse effects on the air, land, surface water or ground water.

3. Investigation has shown the need for additional equipment, construction, procedures and testing to insure the protection of the public health and the environment from significant adverse effects.

C. If the Commissioner finds that the solid or hazardous wastes are no longer being stored, treated or disposed of at a facility in accordance with Board regulations, the Commissioner may revoke the permit issued for such facility or, as a condition to granting or continuing in effect a permit, may require the person to whom the permit was issued to enter into an agreement with the Commissioner that such permit will provide perpetual care and surveillance of the facility.

32.1-182. Financial responsibility for abandoned facilities. — A. The Board shall, no sooner than October one, nineteen hundred eighty-one, promulgate regulations which insure that, in the event that a facility for the disposal of solid waste or a facility in which hazardous waste is stored, treated, or disposal is abandoned, the costs associated with protecting the public health and safety from the consequences of such abandonment may be recovered from the person abandoning the facility.

B. Such regulations may include bonding requirements, the creation of a trust fund to be maintained with the State Health Department, self-insurance, other forms of commercial insurance, or such other mechanism as the Board may deem appropriate. Regulations governing the amount thereof shall take into consideration the potential for contamination and injury by the solid or hazardous waste, the cost of disposal of the solid or hazardous waste and the cost of restoring the facility to a safe condition.

C. No sooner than October one, nineteen hundred eighty, and no later than March one, nineteen hundred eighty-one, the Board shall make available for public hearing and comment an initial draft of such regulations.

D. No State, local or other governmental agency shall be required to comply with such regulations.

E. Forfeiture of any financial obligation imposed pursuant to this section shall not relieve any holder of a permit issued pursuant to the provisions of this article of any other legal obligations for the consequences of abandonment of any facility.



F. Any funds forfeited pursuant to this section and the regulations of the Board shall be paid over to the county, city or town in which the abandoned facility is located. The county, city or town in which the facility is located shall expend such forfeited funds as necessary to restore and maintain such facility in a safe condition.

32.1-183. Solid waste management. — The Governor may designate regional boundaries for solid waste management. In the designation of such boundaries, the Governor shall consider urban concentrations, geographic conditions, markets and other factors as may be appropriate for carrying out regional solid waste management. The governing bodies of the counties, cities and towns within any region so designated shall be responsible for the development of a comprehensive regional solid waste management plan in cooperation with any planning district commission or commissioner in such region. Each regional solid waste management plan shall include all aspects of solid waste management. The governing body of each county, city or town shall be responsible for insuring, within its jurisdictional boundaries, the implementation of those portions of the regional solid waste management plan applicable to such county, city or town. Until such date as a county, city or town becomes subject to a regional solid waste management plan, such county, city or town shall be responsible for implementation of a local solid waste management plan which meets such standards as may be prescribed by the Board by regulation.

If a county levies a consumer utility tax and the ordinance provides that revenues derived from such source, to the extent necessary, be used for solid waste disposal, the county may charge a town or its residents, establishments and institutions an amount not to exceed their pro rata cost, based upon population for such solid waste management if the town levies a consumer utility tax.

32.1-184. Contracts by counties, cities and towns. — Any county, city or town may enter into contracts for the supply of solid waste to resource recovery facilities.

32.1-185. State aid to localities for solid waste disposal. — A. To assist it in the collection, transportation, disposal and management of solid waste in accordance with federal and State legislation, regulations and procedures, each county, city and town may receive for each fiscal year from the general fund of the State Treasury such sums as are appropriated for such purposes. The Commissioner shall distribute such grants on a quarterly basis, in advance, in accordance with regulations adopted by the Board, to those counties, cities and towns which submit applications therefor.

B. Any county, city or town applying for and receiving such funds shall utilize the funds only for the collection, transportation, disposal or management of solid waste. The Commissioner shall cause the use and expenditure of such funds to be audited and all funds not used for the specific purposes stated herein shall be refunded to the general fund.

C. All funds granted under the provisions of this section shall be conditioned upon and subject to the satisfactory compliance by the county, city or town with applicable federal and State legislation and regulations. The Commissioner may conduct periodic inspections to ensure satisfactory compliance.

32.1-186. Civil penalty. — In addition to the provisions of 32.1-27, any person who violates any provisions of this article or any regulation or order of the Board adopted pursuant to this article shall, upon such finding by an appropriate circuit court, be assessed a civil penalty of not more than five thousand dollars for each day of such violation. All penalties under this section shall be recovered in a civil action brought by the Attorney General in the name of the Commonwealth.